

SHARP®

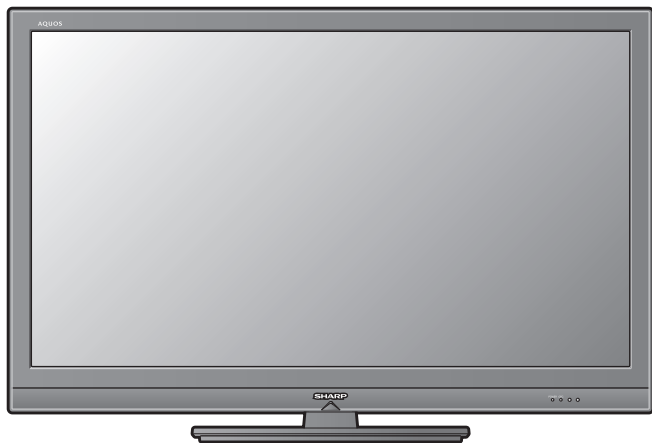
MODEL

LC-46LB700X

LCD COLOUR TELEVISION

OPERATION MANUAL

AQUOS



 **dts**[™]
2.0+Digital Out

 **Blu-ray Disc**[™]

 **DVD**
VIDEO

 **COMPACT disc**
DIGITAL AUDIO

 **BD-LIVE**[™]

RW
COMPATIBLE

 **Java**[™]
POWERED

 **FULL HD 1080P**

HDMI[™]
HIGH-DEFINITION MULTIMEDIA INTERFACE

 **DOLBY**
DIGITAL

SFS[®]
TruSurround HD

LED

OPERATION MANUAL

Dear SHARP customer

Thank you for your purchase of the SHARP LCD colour TV product. To ensure safety and many years of trouble-free operation of your product, please read the Important Safety Precautions carefully before using this product.

Contents

Introduction

Dear SHARP customer	1
Contents.....	1
Important Safety Precautions	5
Supplied accessories.....	6
Trademarks.....	6

Preparation

Attaching the stand.....	7
Part names.....	8
TV (Front/Side).....	8
TV (Rear)	9
Remote control unit	10
Before turning on the power	11
Supplying electric power to the antenna	12
Initial auto installation.....	12
Checking signal strength and channel strength	13
Connecting external devices	14
Connecting a VCR, game console or camcorder	14
Connecting a DVD player	14
Connecting a STB (Satellite, Cable, etc.).....	15
Connecting a PC.....	15
Connecting to the ETHERNET terminal	16
Inserting the batteries	17
Using the remote control unit	17
Cautions regarding the remote control unit.....	17
Turning the TV on/off	18
Turning on the power.....	18
Turning off the power.....	18
About Menu operations	19
What is Menu?	19
Basic Menu operations.....	19
About Guide Display	19
Blue illumination Emblem	19
Menu items (TV/INPUT 4-6).....	20
Menu items (HDMI/RGB)	21

Watching TV

Setting channels automatically.....	22
Selecting programmes	23
Adjusting the volume	23
Menu language settings	23
Setting channels to your preference	24
Digital settings	24
Manual setting for each channel (Analogue).....	25
Sorting programmes	27
Erasing programmes.....	27
Useful viewing functions	28
Returning to the previously selected channel.....	28
Freezing the image	28
Muting the audio temporarily	28
Outputting only audio	28
Switching the analogue audio format	29
Switching the digital audio format	29
Password setting for the child lock (for TV input mode).....	30
Parental rate.....	31

Watching TV (Continued)

Programme title display	31
Key lock	31
Energy conservation settings	32
Auto power-off at a designated time	32
ECO picture control	32
Energy save	32
Blu-ray disc Ecology	32
Auto power-off after the end of broadcast	33
Auto power-off when there are no operations performed	33
Quick start	33
Picture size settings	33
Selecting the Wide Screen Signalling (WSS) picture size automatically	33
Selecting the Wide Screen Signalling (WSS) picture size manually	33
Selecting the picture size manually	34
Selecting a preset AV MODE	35
Manual picture settings	36
Picture adjustment	36
Advanced picture settings	37
Other picture settings	38
Adjusting the image position	38
Game play time	38
Indicating time on the screen	39
Audio adjustment	40
Output volume select	40
Automatic volume adjustment	41
Clear voice	41
Digital audio output	41
Using Digital Audio Output	42
Programme Guide	42
Info	42
ATV (Analogue)/DTV/RADIO buttons	43
EPG	44
EPG display settings	44
Time zone	44
Selecting a programme using EPG	45
Basic Operation	45
Selecting a programme	45
Timer setting using EPG	47
 Cancelling the timer setting	47

Settings when using external devices

Settings when using HDMI output devices	48
Selecting the input source and signal type	49
Selecting input source	49
Selecting input signal type	49
Selecting the size of the picture for recording	49
Labelling input sources	50
Skipping HDMI/RGB input	50
Colour system settings	50
Setting display colour	51
Channel selecting effect	51

About Discs

Blu-ray Disc	52
Types of Discs that Can Be Used with This TV	52
Discs that Cannot Be Used with This TV	53
BD-VIDEO	53
Title, Chapter and Track	53
Icons Used on DVD-VIDEO Disc Cases	54
The Icons Used in This Operation Manual	54
Disc Precautions	55
Copyright	55

Disc Playback

Loading a Disc..... 56
Removing a Disc 56
BD/DVD-VIDEO Playback..... 57
BD/DVD Menu..... 57
 Start Playback by Selecting a Title from the Top Menu 57
 Using the Disc Menu..... 58
 Using the Pop-up Menu..... 58
BONUSVIEW or BD-LIVE 58
 Enjoying BONUSVIEW or BD-LIVE..... 58
 Use of Picture in Picture Function (Secondary Audio/Video Playback)..... 59
 Virtual Package 59
 BD-LIVE 59
DVD-R/-RW/BD-RE/-R Playback..... 59
 Playback by Selecting a Playlist 60
 Sorting the Titles..... 60
 Playing Back the Title You Stopped While Being Played 60
Audio CD Playback 60
 Playback from the Beginning..... 60
 Selecting a Track for Playback 60
Playback Functions..... 61
 Fast Forward/Reverse (Search) 61
 Skipping to the Next or the Start of the Current Chapter (Track) 61
 Pause/Frame Advance Playback 61
 Slow Playback 61
 Repeat Playback of a Title or Chapter (Repeat Playback)..... 61
 Partial Repeat Playback (Repeat Playback of a Specified Part)..... 62
 Switching the Audio..... 62
 Switching the Angle..... 63
 Displaying the Angle Mark..... 63
Settings During Playback 63
 DISC MENU Control 63
 DISC MENU Operation Procedure 64
 DISC MENU Which Can Be Set..... 64

Blu-ray disc Setup

Audio Video Settings..... 65
Playback Setting 65
Communication Setup..... 66
The operation procedure for inputting characters manually..... 68
Version 70
USB Memory Management..... 70
Software Update 70

AQUOS LINK

Controlling HDMI devices using AQUOS LINK..... 72
AQUOS LINK connection..... 73
 Connecting an AQUOS BD Player/AQUOS Recorder via the AQUOS AUDIO speaker system..... 73
 Connecting an AQUOS BD Player/AQUOS Recorder only 73
AQUOS LINK setup 73
 AQUOS LINK control 73
 Auto power on 74
 Selecting recorder 74
 Selecting channel key 74
 Using genre info. 74
Operating an AQUOS LINK device 74
 Listening with the AQUOS AUDIO speaker system 75
 Listening with the AQUOS TV speaker system 75
 Manually changing the AQUOS AUDIO speaker system's sound mode..... 75
 Calling up the menu of an external device connected with the TV via HDMI 75
 Playback of titles using AQUOS LINK 75
 Selecting media type for CEC-compatible recorder..... 76
 HDMI device selection..... 76
 Recording via the AQUOS Recorder EPG (only for recorders)..... 76

Connecting a PC

HDMI Connection 77
 Analogue Connection 77
 PC audio select 78
 Displaying a PC image on the screen 78
 Selecting the picture size 78
 Adjusting the PC image automatically 79
 Adjusting the PC image manually 79
 PC Control of the TV 80
 PC compatibility chart 81
 RS-232C commands list 81

Teletext function

About Teletext 82
 Teletext language setting 83
 Displaying Subpages 83
 Time display 83
 Displaying Subtitles 84
 Switching subtitle languages 84

Appendix

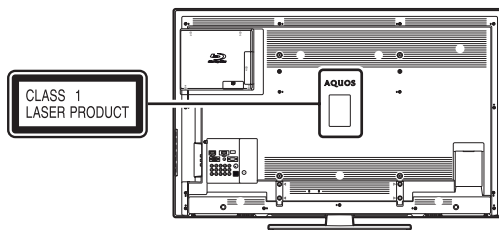
Troubleshooting 85
 Troubleshooting-Digital broadcasting 85
 Troubleshooting-Disc Playback 86
 Troubleshooting-Network 88
 On-screen Error Messages 88
 Error messages about recording using AQUOS LINK 89
 Reset 90
 Download setup 90
 Downloading the software 90
 Information 90
 Message list 90
 Receiver report 90
 Identification 90
 Specifications 91
 Optional accessory 91
 Dimensional drawings 92
 Mounting the TV on the wall 93
 Removing the stand 93
 Handling and precautions with the wall-mounted TV 94
 Protection against overturning 95
 CLEARING THE PASSWORD 96
 CLEARING THE PIN CODE 96
 Information on the software license for this product 97

CAUTION:

USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

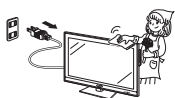
AS THE LASER BEAM USED IN THIS UNIT IS HARMFUL TO THE EYES, DO NOT ATTEMPT TO DISASSEMBLE THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

- This Liquid Crystal Television is classified as a CLASS 1 LASER product.
- The CLASS 1 LASER PRODUCT label is located on the rear cover.
- This product contains a low power laser device. To ensure continued safety do not remove any cover or attempt to gain access to the inside of the product.
Refer all servicing to qualified personnel.



Important Safety Precautions

- **Cleaning** — Unplug the AC cord from the AC outlet before cleaning the product. Use a soft damp cloth to clean the product. Do not use liquid cleaners, aerosol cleaners or chemical cloth to clean it, as such materials may damage the product.



- **Water and moisture** — Do not use the product near water, such as bathtub, washbasin, kitchen sink, laundry tub, swimming pool and in a wet basement.



- Do not place vases or any other water-filled containers on this product. The water may spill onto the product causing fire or electric shock.



- **Stand** — Do not place the product on an unstable cart, stand, tripod or table. Doing so can cause the product to fall, resulting in serious personal injuries as well as damage to the product. Use only a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the product. When mounting the product on a wall, be sure to follow the manufacturer's instructions. Use only the mounting hardware recommended by the manufacturer.



- When relocating the product placed on a cart, it must be moved with utmost care. Sudden stops, excessive force and uneven floor surface can cause the product to fall from the cart.



- **Ventilation** — The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.



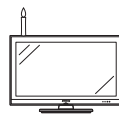
- The LCD panel used in this product is made of glass. Therefore, it can break when the product is struck forcefully or with a sharp object. If the LCD panel is broken, be careful not to be injured by broken glass.



- **Heat sources** — Keep the product away from heat sources such as radiators, heaters, stoves and other heat-generating products (including amplifiers).



- To prevent fire, never place any type of candle or naked flames on the top or near the TV set.



- To prevent fire or shock hazard, do not place the AC power cord under the TV set or other heavy items.



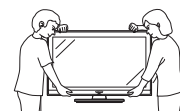
- Do not place heavy objects on this product or stand on it. Doing so could cause injury if the product overturns. Take special care near children and pets.



The LCD panel is a very high technology product with 2,073,600 pixels, giving you fine picture details. Due to the very large number of pixels, occasionally a few non-active pixels may appear on the screen as a fixed point of blue, green or red. This is within product specifications and does not constitute a fault.

Precautions when transporting the TV

Be sure to always carry the TV by two people holding it with two hands — one hand on each side of the TV.



- Do not display a still picture for a long time, as this could cause an afterimage to remain.

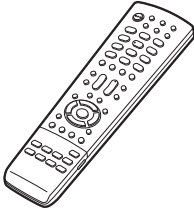

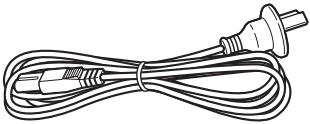
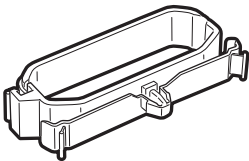




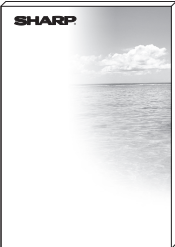





- Install the product on the place where the AC cord can be unplugged easily from the AC outlet, or from the AC INPUT terminal on the rear of the product.

If a television is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, particularly to children, can be avoided by taking simple precautions such as:




- Using cabinets or stands recommended by the manufacturer of the television.
- Only using furniture that can safely support the television.
- Ensuring the television is not overhanging the edge of the supporting furniture.
- Not placing the television on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television to a suitable support.
- Not standing the televisions on cloth or other materials placed between the television and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the television or its controls.

Supplied accessories

Make sure the following accessories are provided with the product.

Remote control unit	“AAA” size battery (× 2)	AC cord
 <p>Used with batteries inserted. Page 10</p>	 <p>Page 17</p>	 <p>Always use the AC cord supplied with the TV. Page 11</p>
Cable clamp	Stand unit	
 <p>For bundling cables. Page 11</p>	 Stand base  Stand post  Short screws (× 4)  Long screws (× 4) <p>Put all parts of the stand unit together and then attach it to the TV. Page 7</p>	
Operation manual	Safety restrains	Cloth
	 Restraining band  Screw for band  Clamps  Screws for clamps <p>Page 95</p>	 <p>For discs.</p>

Trademarks

- TruSurround HD, SRS and  symbol are trademarks of SRS Labs, Inc. TruSurround HD technology is incorporated under license from SRS Labs, Inc.
- Manufactured under license from Dolby Laboratories. Dolby and the double-D symbol are trademarks of Dolby Laboratories.
- “HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.”
- Manufactured under license under U.S. Patent #'s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,487,535 & other U.S. and worldwide patents issued & pending. DTS and DTS 2.0 + Digital Out are registered trademarks and the DTS logos and Symbol are trademarks of DTS, Inc. ©1996-2008 DTS, Inc. All Rights Reserved.
-  is a trademark.
- “BD-LIVE” logo is a trademark of Blu-ray Disc Association.
-  is a trademark of DVD Format/Logo Licensing Corporation.
- Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and/or other countries.
- LC フォント、LC FONT、エルシーフォント and LC logo mark are registered trademarks of SHARP Corporation. This product is embedded with LC Font technology, which was developed by SHARP Corporation for clearly displaying easy-to-read characters on LCD screens. However, other fonts are used for some screen pages, too.

Preparation

Attaching the stand

- Before attaching (or detaching) the stand, unplug the AC cord from the AC INPUT terminal.
- Before performing work, spread cushioning over the base area to lay the TV on. This will prevent it from being damaged.

CAUTION

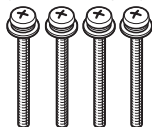
- **Attach the stand in the correct direction.**
- **Be sure to follow the instructions. Incorrect installation of the stand may result in the TV falling over.**

1 Confirm the 8 screws supplied with the TV.

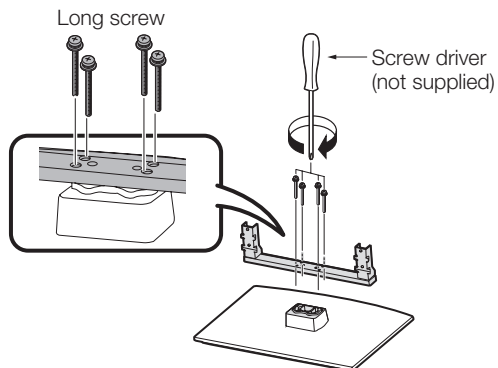
Short screws (× 4)
(used in step 3)



Long screws (× 4)
(used in step 2)

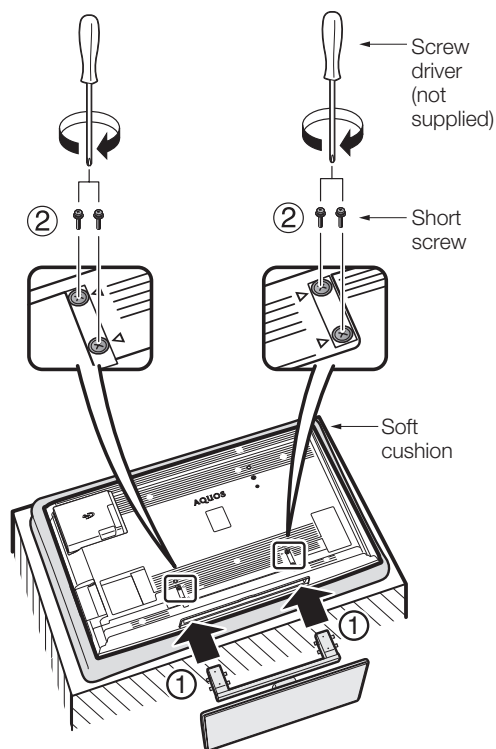


2 Attach the supporting post for the stand unit onto the base as shown below.



3 ① Insert the stand into the openings on the bottom of the TV.

② Insert and tighten the 4 short screws into the 4 holes on the rear of the TV.



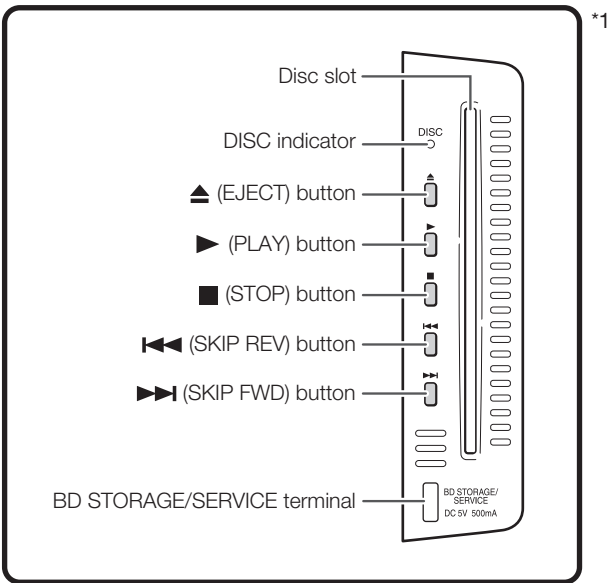
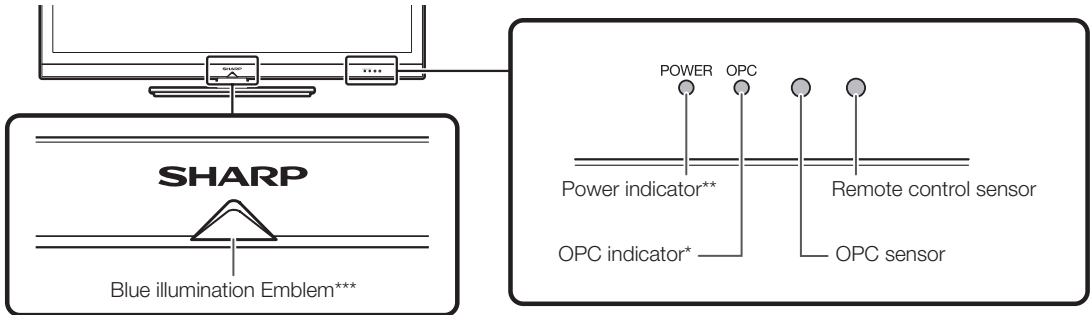
NOTE

- To detach the stand, perform the steps in reverse order.

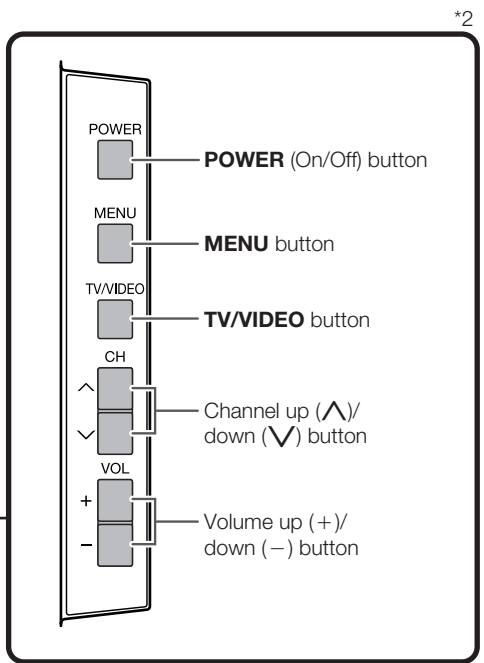
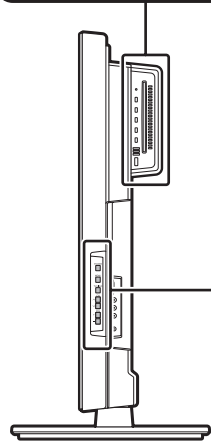
Preparation

Part names

TV (Front/Side)



*1



*2

NOTE

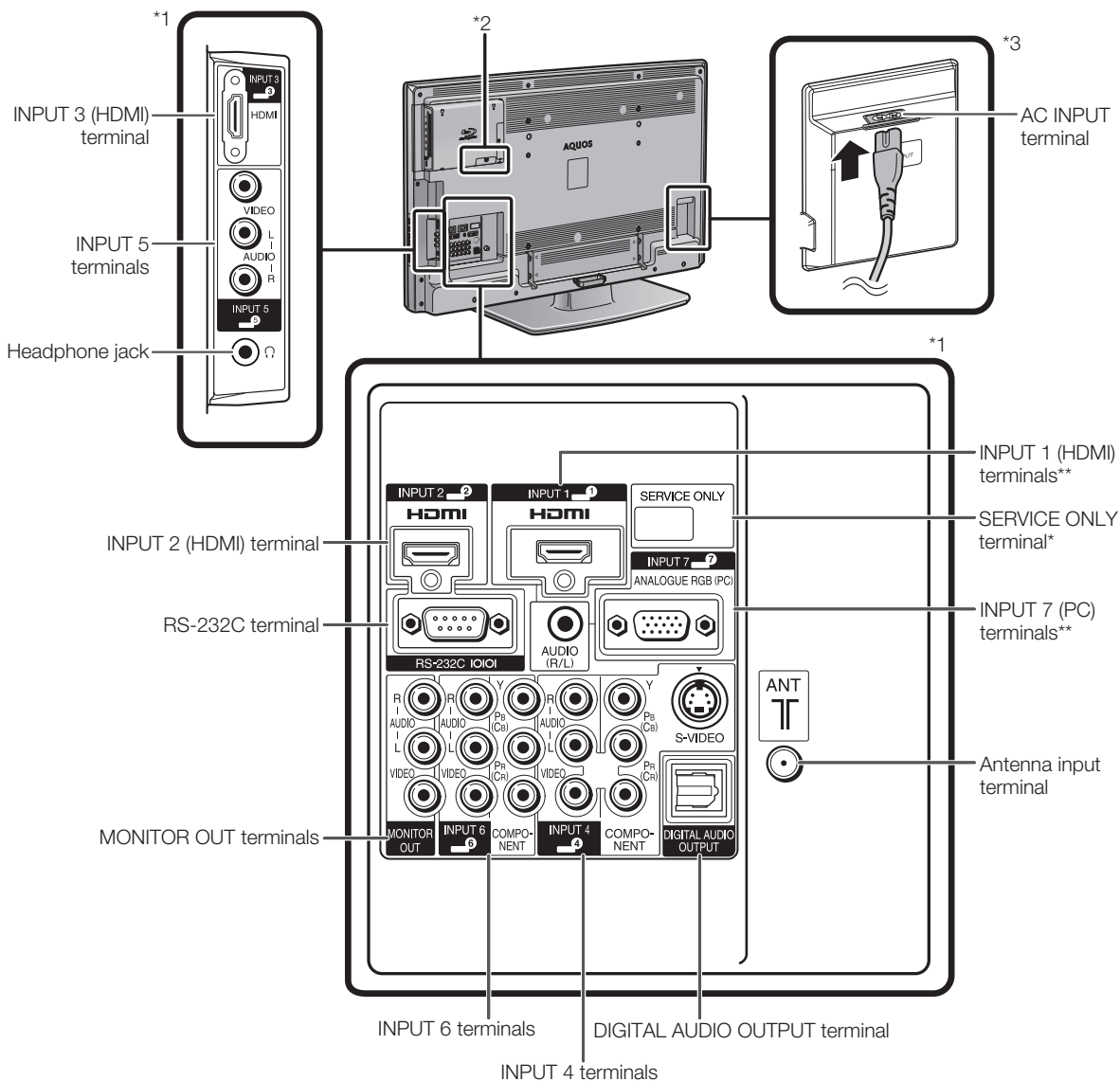
- *1 For operation of buttons on the Disc Drive, see pages 56 to 63.
- *2 For operation of buttons on the TV, see page 19.

*OPC: Optical Picture Control (See page 36.)
 ** See page 18 for the TV status indicator.
 *** Blue illumination Emblem (See page 19.)

• The illustrations in this operation manual are for explanation purposes and may vary slightly from the actual operations.

Preparation

TV (Rear)



NOTE

*1 See pages 14 and 15 for external equipment connection.

*2 The Disc Drive has an ETHERNET terminal.

You will be able to enjoy additional contents by downloading them via the Internet.
(For the BD-VIDEO discs compatible with BD-LIVE.)

*3 See page 11 for connecting the AC cord.

* Usually do not connect anything to this terminal as it is reserved only for service personnel.

** The INPUT 1 and INPUT 7 terminals can both use the same audio input terminal. However, the proper item must be selected in the "PC audio select" menu. (See page 78.)

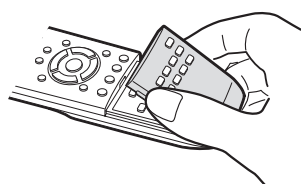
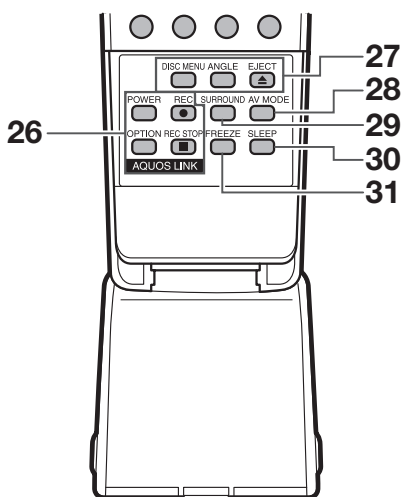
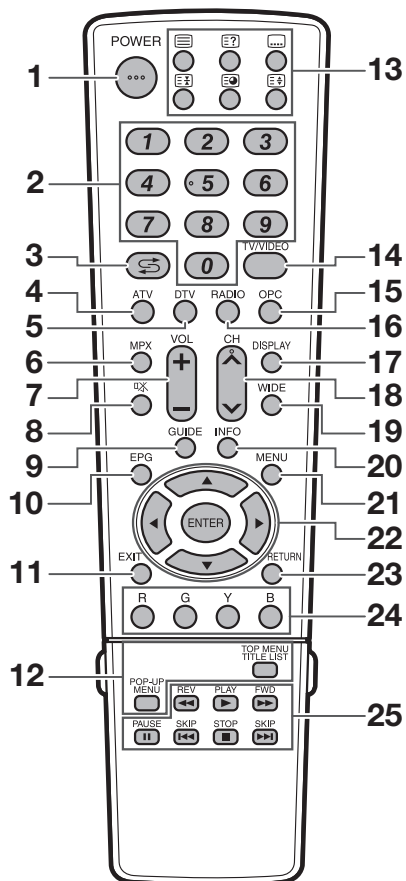
Regarding the headphone jack

- Use headphones with a stereo mini plug (ϕ 3.5 mm).
- Be sure to unplug headphones from the jack when they are not in use.
- The speakers do not output volume when headphones are plugged in.
- The "Audio" menu cannot be operated when headphones are plugged in.
- You can set the volume to different levels for each input source.

Volume display when headphones are plugged in



Remote control unit



- 1 **POWER (STANDBY/ON):** To switch the power on and off. (See page 18.)
- 2 **0 - 9:** Set the channel. (See page 23.)
TELETEXT mode: Set the page. (See pages 82 and 83.)
- 3 **↶ (Flashback):** Press to return to the previous selected channel or external input mode. (See page 28.)
- 4 **ATV:** Press to access ANALOGUE mode. (See page 43.)
- 5 **DTV:** Press to access DTV mode. (See page 43.)
- 6 **MPX:** Select the sound multiplex mode. (See page 29.)
- 7 **VOL + /VOL -:** Set the volume. (See page 23.)
- 8 **🔇 (Mute):** Mute the sound. (See page 28.)
- 9 **GUIDE:** DTV mode: Display the programme list. (See page 42.)
- 10 **EPG:** DTV mode: To display EPG (Electronic Programme Guide) screen. (See pages 44 to 47.)
- 11 **EXIT:** Turn off the On-Screen Display.
- 12 **TOP MENU/TITLE LIST, POP-UP MENU:** Use these buttons when playing back a disc. (See pages 56 to 64 for details.)
- 13 **☒ (TELETEXT):** Select the TELETEXT mode. (all TV image, all TEXT image, TV/TEXT image) (See pages 82 to 83.)
☒ (Reveal hidden for TELETEXT): TELETEXT mode: Display hidden characters. (See page 82.)
☒ (SUBTITLE): To turn the subtitles on and off. (See page 84.)
☒ (Hold): TELETEXT mode: Stop updating Teletext pages automatically. Press ☒ again to release the hold mode. (See page 82.)
☒ (Subpage): Display the Teletext subpage directly. (See page 83.)
☒ (Top/Bottom/Full): TELETEXT mode: Set the area of magnification. (See page 82.)
- 14 **TV/VIDEO (INPUT SOURCE):** Select an input source. (TV, Blu-ray, INPUT1, INPUT2, INPUT3, INPUT4, INPUT5, INPUT6, INPUT7 (PC)) (See pages 14, 48 and 50.)
- 15 **OPC:** To switch the Optical Picture Control on and off. (See page 36.)
- 16 **RADIO:** Press to access RADIO mode. (See page 43.)
- 17 **DISPLAY:** Displays the channel or input information. When a Blu-ray disc is loaded, the disc information during playback is displayed. DTV mode: Displays the time information included in the DTV broadcast. ATV mode: Displays the time information included in the Teletext broadcast. (See page 83.)
- 18 **CH^/CH^V:** TV input mode: Select the channel. (See page 23.)
TELETEXT mode: Select the page. (See pages 82 and 83.)
- 19 **WIDE:** Change the wide image mode. (See pages 34 and 78.)
- 20 **INFO:** DTV mode: Display the programme information. (See page 42.)
- 21 **MENU:** Display the menu screen. (See page 19.)
- 22 **▲/▼/◀/▶ (Cursor):** Select a desired item on the setting screen.
ENTER: Execute a command.
- 23 **RETURN:** MENU mode: Return to the previous menu screen. (See page 19.)
- 24 **Colour (Red/Green/Yellow/Blue):** TELETEXT mode: Select a page. (See page 82.)
Blu-ray mode: Select a desired item on the setting screen. (See pages 59, 60, 68.)
- 25 **◀◀, ▶▶, ⏪, ⏩, ⏸, ⏹, ⏺, ⏻:** Operate the Disc Drive or external equipment.
- 26 **AQUOS LINK buttons:** If external equipment such as a AQUOS BD Player is connected via HDMI cables and is AQUOS LINK compatible, you can use these AQUOS LINK buttons. (See pages 72 to 76 for details.)
- 27 **DISC MENU, ANGLE, EJECT:** Use these buttons when playing back a disc. (See pages 56 to 64 for details.)
- 28 **AV MODE:** Select a video setting. (See page 35.)
- 29 **SURROUND:** Select Surround settings. (See page 40.)
- 30 **SLEEP:** Set the Sleep timer. (See page 32.)
- 31 **FREEZE:** Freeze a motion picture on the screen. (See page 28.)

Preparation

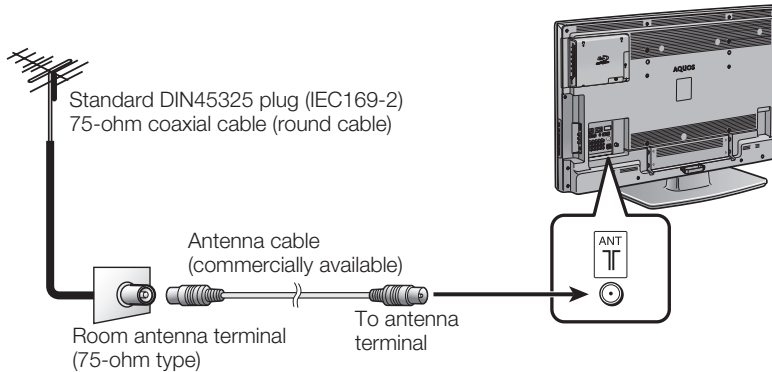
Before turning on the power

Notes on installing the TV

- Avoid direct sunlight and place the TV in a well-ventilated location.
- Place the TV in a level location.
- Do not turn on the power of the TV before connecting the AC cord.

1 Connecting the antenna cable

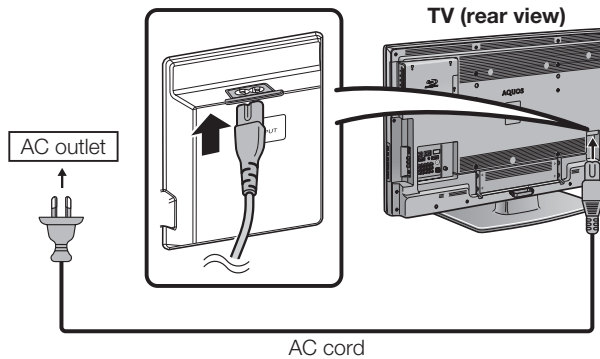
To enjoy a clearer picture, use an outdoor antenna. The following is a brief explanation of the types of connections that are used for coaxial cable.



2 Connecting external devices

See pages 14 and 15 for connecting external equipment, such as a VCR and DVD player.

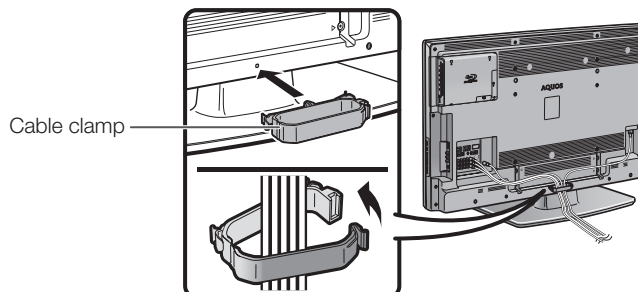
3 Connecting the AC cord



- Place the TV close to the AC outlet, and keep the power plug within reach.
- Disconnect the AC cord from the AC outlet if the TV will not be used for a long period of time.

4 Bundling the cables

Insert the cable clamp in the hole on the TV as shown.

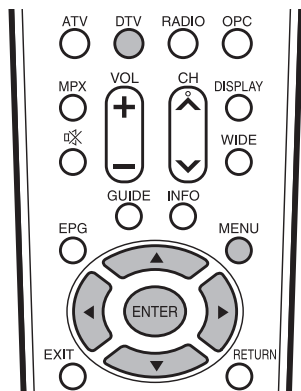


CAUTION

- TO PREVENT RISK OF ELECTRIC SHOCK, DO NOT TOUCH UN-INSULATED PARTS OF ANY CABLES WITH THE AC CORD CONNECTED.

Supplying electric power to the antenna

When you set-up the DTV antenna for the first time, or connect the antenna to a community antenna, you need to proceed to set the antenna by following this manual.



- 1 Press **DTV** to access DTV mode.
- 2 Press **MENU** and the MENU screen displays.
- 3 Press **◀/▶** to select "Setup".
- 4 Press **▲/▼** to select "Antenna Setup-DIGITAL" and then press **ENTER**.
- 5 Press **▲/▼** to select "Supply Voltage" and then press **ENTER**.
- 6 Press **◀/▶** to select "On" and then press **ENTER**.

Selected item	Description
On	Select "On" when your antenna is set-up and connected independently. Typical supply voltage: 5V Typical supply current: 50mA
Off	Select "Off" when you do not need to supply voltage to your antenna, i.e. when your antenna is connected to a community antenna. (The factory default setting of this function is "Off".)

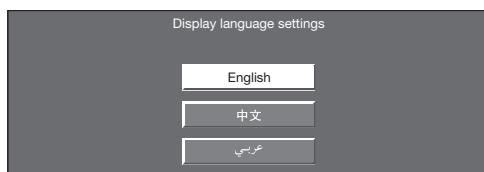
Initial auto installation

When the TV powers on for the first time after purchase, the initial auto installation wizard appears. Follow the menus and make the necessary settings one after another.

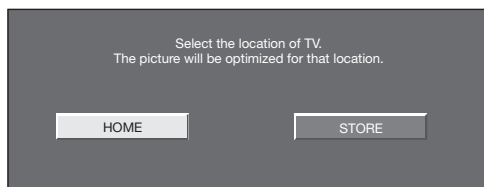
Confirm the following before turning on the power

- Is the antenna cable connected?
- Is the AC cord plugged in?

- 1 Press **POWER** on the TV.
 - The initial auto installation wizard appears.
- 2 Setting the on-screen display language.

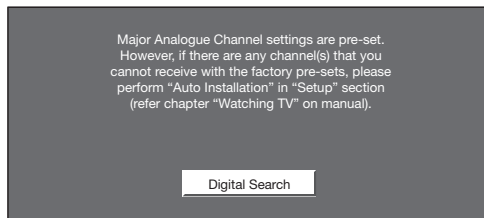


- 3 Press **▲/▼** to select the desired language, and then press **ENTER**. Press **◀/▶** to select "HOME" or "STORE", and then press **ENTER**.



- HOME: "STANDARD" will be the default value for the "AV MODE" setting. "Blu-ray disc Ecology" is set to "Enable".
- STORE: "DYNAMIC (Fixed)" will be the default value for the "AV MODE" setting. If the "AV MODE" is changed, the TV will automatically switch back to "DYNAMIC (Fixed)" when there is no further change to TV setting for 30 minutes. "Blu-ray disc Ecology" is not available.

- 4 Press **ENTER**.



- Major Analogue Channel settings are pre-set. However, if there are any channel(s) that you cannot receive with the factory pre-sets, please perform "Auto installation" in "Setup" section (See page 22.)

Preparation

Initial auto installation (continued)

5 The TV searches for, sorts and stores all the receivable TV stations according to their settings and the connected antenna.

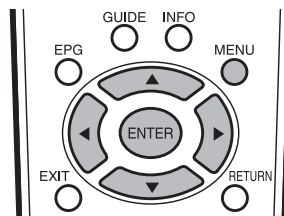
- To abort the initial auto installation in progress, press **RETURN**.

NOTE

- You cannot change language in “Blu-ray disc Setup” menu. In “Blu-ray disc Setup” menu, language is English only.
- HOME mode: Settings are optimised for normal home viewing and energy efficiency.
- STORE mode: Settings are designed for maximum impact in retail store displays.
- To change the STORE mode to HOME mode, please refer to page 90 to reset the unit.
- If you turn off the power on the TV after performing step 4, the initial auto installation wizard does not appear. The auto installation function allows you to execute the auto installation again from the Setup menu. (Page 22)
- The initial auto installation wizard will go off if you leave the TV unattended for 30 minutes before searching for channels in step 5.

Checking signal strength and channel strength

If you install a DVB-T antenna for the first time or relocate it, you should adjust the alignment of the antenna to receive a good reception while checking the antenna setup screen.



- Press **MENU** and the MENU screen displays.
- Press **◀▶** to select “Setup”.
- Press **▲▼** to select “Antenna Setup-DIGITAL” and then press **ENTER**.

Checking signal strength

Press **▲▼** to select “Signal Strength”.

Supply voltage	
Signal strength	
Channel strength	CH No. 21
	Signal strength
	Current 0 Max. 0
	Quality
	Current 0 Max. 0

Checking channel strength

Press **▲▼** to select “Channel strength”, and then press **ENTER**.

Supply voltage	2 6 5 . 2 MHz
Signal strength	
Channel strength	CH No. 21
	Signal strength
	Current 0 Max. 0
	Quality
	Current 0 Max. 0

- Position and align the antenna so that the maximum possible values for “Signal Strength” and “Quality” are obtained.

NOTE

- The values of “Signal Strength” and “Quality” indicate when to check the appropriate alignment of the antenna.

Preparation

Connecting external devices

You can connect many types of external equipment to your TV, like a VCR, game console, camcorder, DVD player, Digital TV STB (Set Top Box) and PC. To view input source images, select the input source from **TV/VIDEO** on the remote control unit or **TV/VIDEO** on the TV.

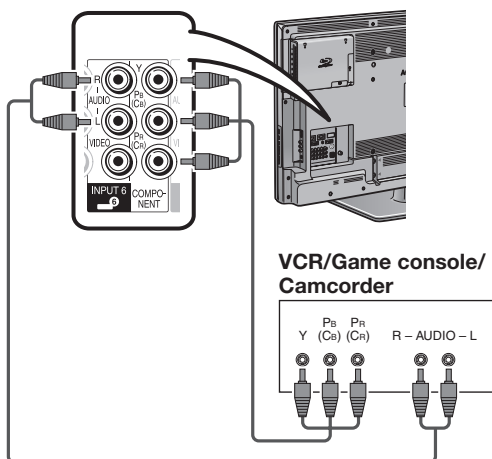
CAUTION

- To protect all equipment, always turn off the TV before connecting to a VCR, game console, camcorder, DVD player, Digital TV STB (Set Top Box), PC or other external equipment.
- Refer to the relevant operation manual (VCR, DVD player, etc.) carefully before making connections.

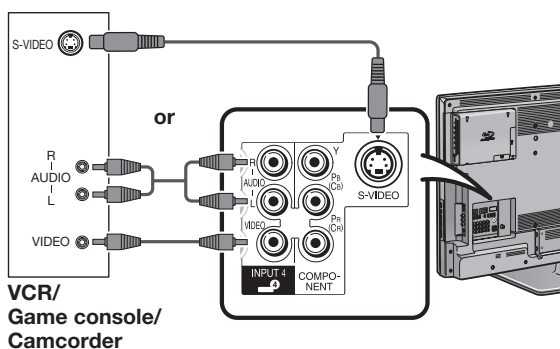
Connecting a VCR, game console or camcorder

A VCR, game console, camcorder and some other audiovisual equipment can be conveniently connected using the INPUT 5 or INPUT 4/INPUT 6 terminals.

When using component cable (commercially available)



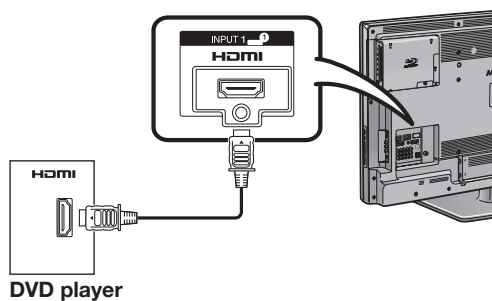
When using composite cable or S-VIDEO cable (commercially available)



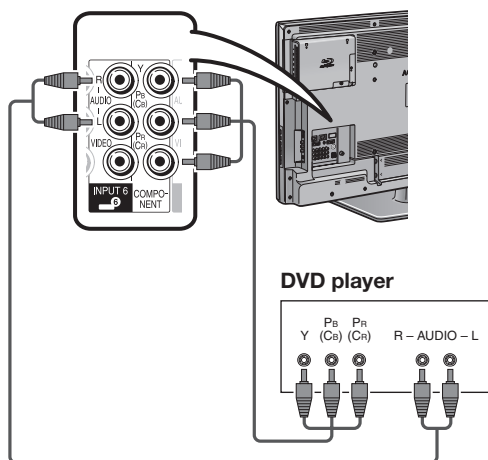
Connecting a DVD player

You can use the INPUT 1/INPUT 2/INPUT 3 (HDMI) or INPUT 4/INPUT 6 terminals when connecting to a Blu-ray disc player, DVD player and other audiovisual equipment.

When using HDMI cable (commercially available)



When using component cable (commercially available)

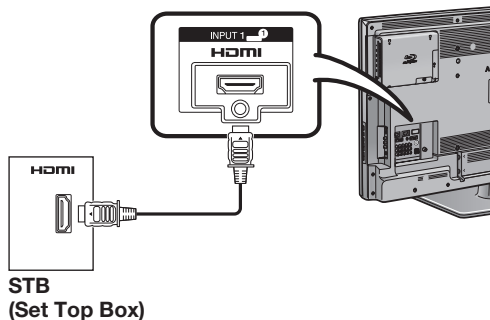


Preparation

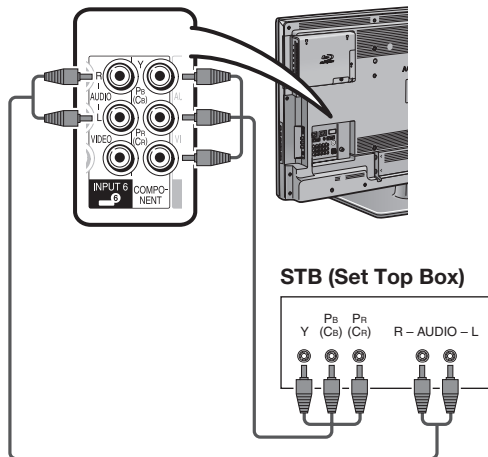
Connecting a STB (Satellite, Cable, etc.)

You can use the INPUT 1/INPUT 2/ INPUT 3 (HDMI) or INPUT 4/INPUT 6 terminals when connecting to a STB (Satellite, Cable, etc.) and other audiovisual equipment.

When using HDMI cable (commercially available)

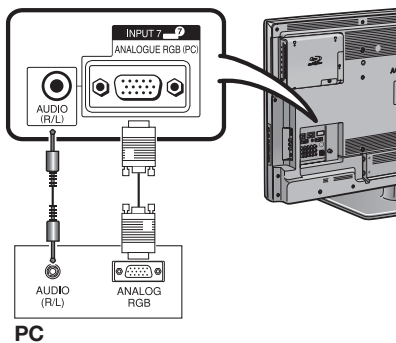


When using component cable (commercially available)



Connecting a PC

You can use the INPUT 7 (PC) terminal when connecting to a PC.



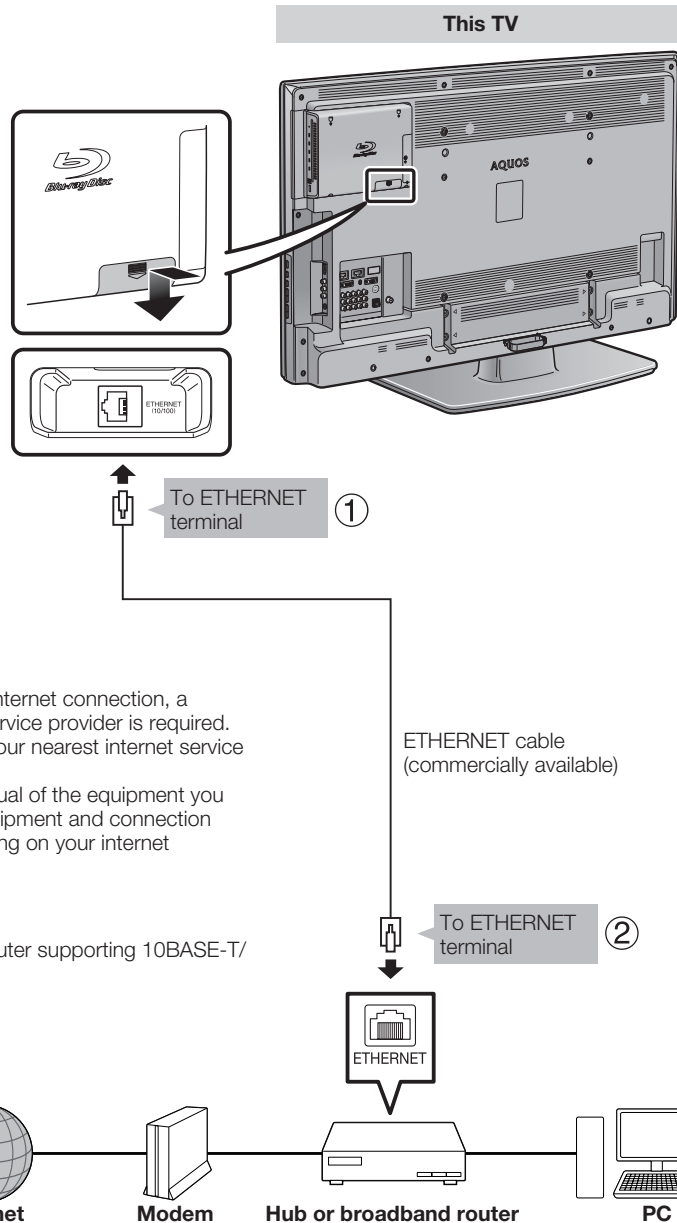
Preparation

Connecting to the ETHERNET terminal

- You can enjoy a variety of contents with interactive functions by connecting to the internet when playing BD-LIVE compatible discs. Refer to pages 59 and 65 regarding further information on BD-LIVE functions.
- When using the internet, a broadband internet connection as shown below is required.

STEPS

- 1 Be sure to turn off this TV and the equipment before making any connections.
- 2 Remove the cover of ETHERNET terminal on rear of the TV, and keep the cover.
- 3 Firmly connect a ETHERNET cable (commercially available) to the ETHERNET terminal (① and ②).



CAUTION

- When using a broadband internet connection, a contract with an internet service provider is required. For more details, contact your nearest internet service provider.
- Refer to the operation manual of the equipment you have as the connected equipment and connection method may differ depending on your internet environment.

NOTE

- Use a ETHERNET cable/router supporting 10BASE-T/100BASE-TX.

Example of a Broadband Internet Connection

After connecting

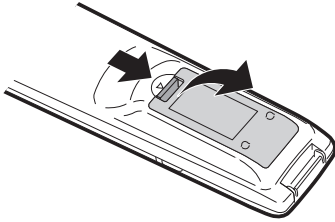
- Perform the communication setting. (Pages 66–67)
- Load a BD-LIVE compatible disc and play back the contents. (Pages 57 and 59)

Preparation

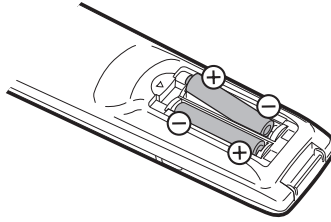
Inserting the batteries

Before using the TV for the first time, insert two “AAA” size batteries (supplied). When the batteries become depleted and the remote control fails to operate, replace the batteries with new “AAA” size batteries.

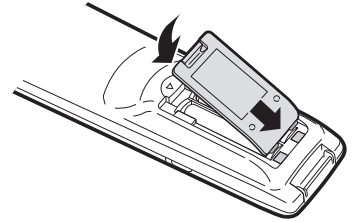
1 Open the battery cover.



2 Insert the two supplied “AAA” size batteries.



3 Close the battery cover.



- Place batteries with their terminals corresponding to the (+) and (-) indications in the battery compartment.

CAUTION

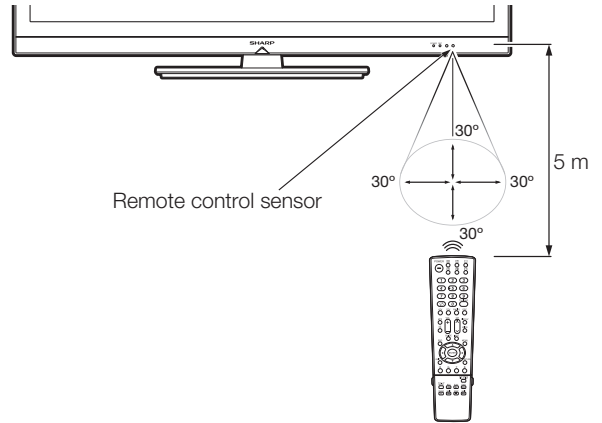
Improper use of batteries can result in chemical leakage or explosion. Be sure to follow the instructions below.

- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Remove batteries as soon as they have worn out. Chemicals that leak from batteries can cause a rash. If you find any chemical leakage, wipe thoroughly with a cloth.
- The batteries supplied with this product may have a shorter life expectancy due to storage conditions.
- If you will not be using the remote control unit for an extended period of time, remove the batteries from it.
- Batteries (battery pack or batteries installed) shall not be exposed to excessive heat such as sunshine, fire or the like.

Using the remote control unit

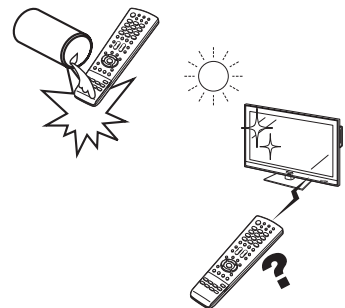
Use the remote control unit by pointing it towards the remote sensor window.

Objects between the remote control unit and sensor window may prevent proper operation.



Cautions regarding the remote control unit

- Do not subject the remote control unit to shock. In addition, do not soak the remote control unit with liquids or place it in an area with high humidity.
- Do not install or place the remote control unit under direct sunlight. The heat may cause deformation of the unit.
- The remote control unit may not work properly if the remote sensor window of the TV is under direct sunlight or strong lighting. In such cases, change the angle of the lighting or TV, or operate the remote control unit closer to the remote sensor window.



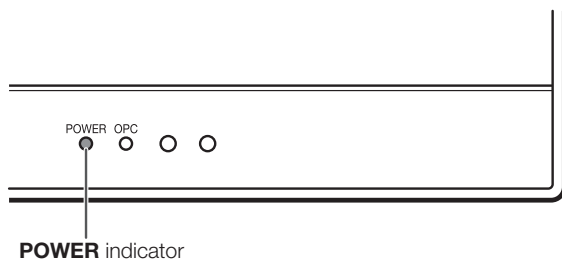
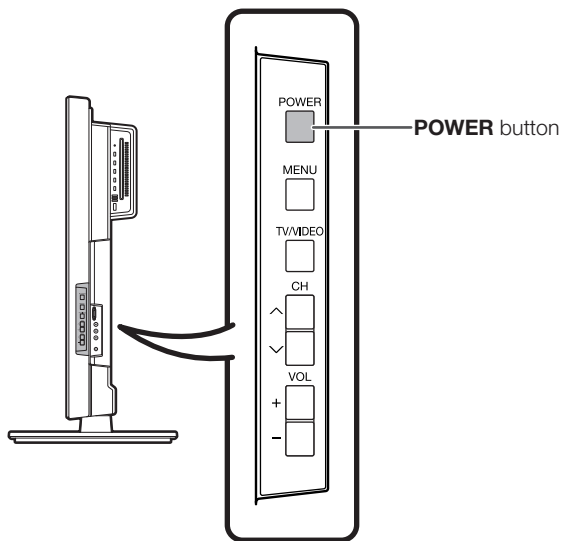
Preparation

Turning the TV on/off

Turning on the power

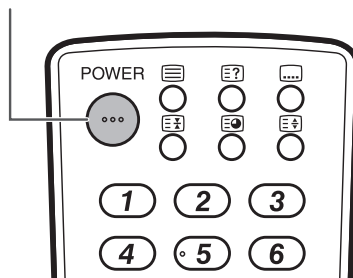
Press **POWER** on the TV.

- POWER indicator (Green): The TV is on. (After a few seconds, an image appears with sound.)
- After turning the power "ON" by pressing **POWER** on the TV, you can turn the power ON/OFF by pressing **POWER** on the remote control.



Turning off the power

POWER button



Press **POWER** on the remote control.

- The TV enters standby mode and the image on the screen disappears.
- The POWER indicator on the TV changes from green to red.

Press **POWER** on the TV.

- The POWER indicator on the TV turns off.
- When the TV is turned off by **POWER** on the TV, you cannot turn on the power by pressing **POWER** on the remote control.

POWER indicator

Light off	Power off
Lighted (Red)	The TV is in standby mode.
Lighted (Green)	The TV is on.

NOTE

- If you are not going to use this TV for a long period of time, be sure to remove the AC cord from the AC outlet.
- Minor power is consumed when the unit is in standby mode.

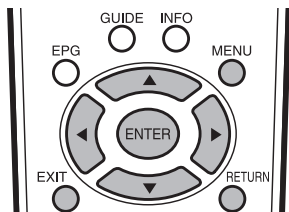
Preparation

About Menu operations

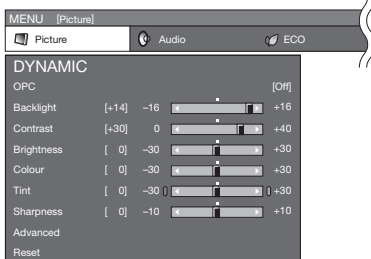
What is Menu?

- You need to bring up the On-Screen Display to perform settings for the TV. The On-Screen Display for the settings is called "Menu".
- The Menu enables various settings and adjustments. (See pages 20 and 21.)
- The Menu can be operated with the remote control unit.

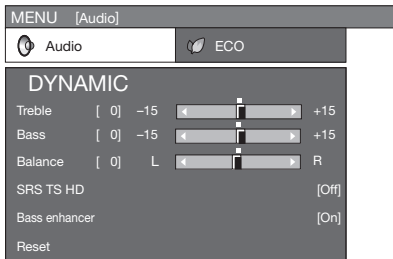
Basic Menu operations



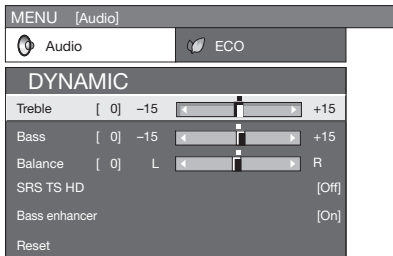
- Press **MENU** and the MENU screen displays.



- Press **◀▶** to select the desired menu, and then press **ENTER**.



- Press **▲▼** to select the desired menu item. Press **ENTER** to proceed if necessary.



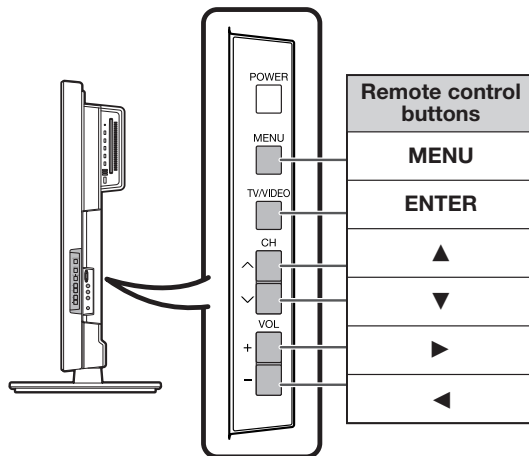
- Press **▲▼** or **◀▶** to select the desired item or adjust the item to the desired level. Press **ENTER** if necessary.

- Press **EXIT** or **MENU** to exit the MENU. Press **RETURN** as necessary to return to the previous MENUS.

Using the control panel of the TV

You can also operate the Menu using the control panel of the TV.

Button operations on the control panel correspond to the ones on the remote control as shown below.

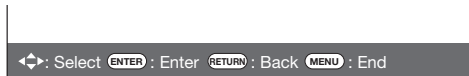


NOTE

- Menu options differ in the selected input modes, but the operating procedures are the same.
- The screens in the operation manual are for explanation purposes (some are enlarged, others cropped) and may vary slightly from the actual screens.

About Guide Display

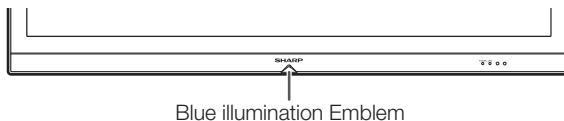
The Guide Display at the bottom of the screen shows operations with an On-Screen Display.



The bar above is an operational guide for the remote control. The bar will change in accordance with each menu setting screen.

Blue illumination Emblem

You can choose to light up the Blue illumination Emblem.



- Press **MENU** and the MENU screen displays.
- Press **◀▶** to select "Setup".
- Press **▲▼** to select "Blue illumination", and then press **ENTER**.
- Press **▲▼** to select "On" or "Off", and then press **ENTER**.

Preparation

Menu items (TV/INPUT 4-6)

List of menu items to help you with operations

Picture

OPC.....	Page 36
Backlight	Page 36
Contrast.....	Page 36
Brightness	Page 36
Colour	Page 36
Tint	Page 36
Sharpness	Page 36
Advanced	
C.M.S.-hue	Page 37
C.M.S.-saturation	Page 37
C.M.S.-value	Page 37
Colour temp.	Page 37
Fine motion advanced.....	Page 37
Film mode	Page 37
Active contrast.....	Page 37
Gamma adjustment	Page 37
DNR.....	Page 37
3D-Y/C	Page 37
Monochrome.....	Page 37
Range of OPC.....	Page 38
Reset.....	Page 36

Option

Blu-ray disc Setup	
Audio Video Settings	Page 65
Playback Setting	Page 65
Communication Setup.....	Page 66-67
Version	Page 70
USB Memory Management.....	Page 70
Software Update	Page 70-71
AQUOS LINK setup	Page 73
Input select	Page 49
PC audio select.....	Page 78
Output volume select.....	Page 40
Auto volume.....	Page 41
Clear voice	Page 41
Digital audio output.....	Page 41
Audio only.....	Page 28
Programme title display.....	Page 31
Time display	Page 39
Game play time.....	Page 38
Colour system.....	Page 50
Key lock.....	Page 31
Setting display colour	Page 51
Channel selecting effect.....	Page 51

Audio

Treble.....	Page 40
Bass	Page 40
Balance.....	Page 40
SRS TS HD	Page 40
Bass enhancer	Page 40
Reset.....	Page 40

Digital setup

REC picture size	Page 49
Download setup.....	Page 90
EPG setup	Page 44
Subtitle	Page 84
Time zone.....	Page 44

ECO

ECO picture control	Page 32
Energy save.....	Page 32
Blu-ray disc Ecology	Page 32
No signal off	Page 33
No operation off.....	Page 33

Information

Message list.....	Page 90
Receiver report.....	Page 90

Setup

Auto installation.....	Page 22
Programme setup.....	Pages 24-27
Child lock	Page 30
Antenna setup-DIGITAL.....	Page 13
Input skip.....	Page 50
Input label.....	Page 50
Position.....	Page 38
WSS	Page 33
4:3 mode.....	Page 33
Quick start	Page 33
Language.....	Page 23
Text language	Page 83
Blue illumination	Page 19
Identification	Page 90
Reset.....	Page 90

NOTE

- Some menu items may not be displayed depending on the selected input source.

Preparation

Menu items (HDMI/RGB)

List of menu items to help you with operations

Picture

OPC.....	Page 36
Backlight.....	Page 36
Contrast.....	Page 36
Brightness.....	Page 36
Colour.....	Page 36
Tint.....	Page 36
Sharpness.....	Page 36
Advanced	
C.M.S.-hue.....	Page 37
C.M.S.-saturation.....	Page 37
C.M.S.-value.....	Page 37
Colour temp.....	Page 37
Fine motion advanced.....	Page 37
Film mode.....	Page 37
Active contrast.....	Page 37
Gamma adjustment.....	Page 37
DNR.....	Page 37
Monochrome.....	Page 37
Range of OPC.....	Page 38
Reset.....	Page 36

Audio

Treble.....	Page 40
Bass.....	Page 40
Balance.....	Page 40
SRS TS HD.....	Page 40
Bass enhancer.....	Page 40
Reset.....	Page 40

ECO

ECO picture control.....	Page 32
Energy save.....	Page 32
Blu-ray disc Ecology.....	Page 32
No signal off.....	Page 33
No operation off.....	Page 33

Setup

Input skip.....	Page 50
Auto sync.....	Page 79
Input label.....	Page 50
Position.....	Page 38
Fine sync.....	Page 79
HDMI auto view.....	Page 48
Quick start.....	Page 33
Language.....	Page 23
Blue illumination.....	Page 19
Reset.....	Page 90

Option

Blu-ray disc Setup	
Audio Video Settings.....	Page 65
Playback Setting.....	Page 65
Communication Setup.....	Page 66-67
Version.....	Page 70
USB Memory Management.....	Page 70
Software Update.....	Page 70-71
AQUOS LINK setup.....	Page 73
PC audio select.....	Page 78
Output volume select.....	Page 40
Auto volume.....	Page 41
Clear voice.....	Page 41
Audio only.....	Page 28
Time display.....	Page 39
Game play time.....	Page 38
Key lock.....	Page 31
Setting display colour.....	Page 51
Channel selecting effect.....	Page 51

Information

Message list.....	Page 90
Receiver report.....	Page 90

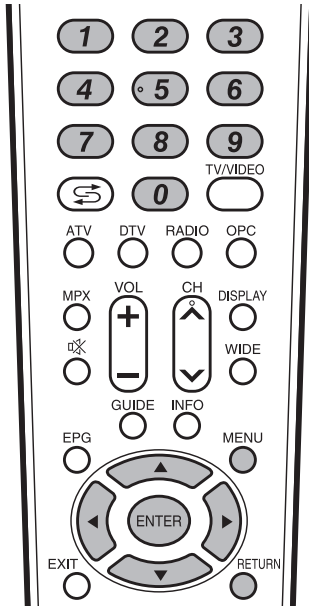
NOTE

- Some menu items may not be displayed depending on the selected input source.

Watching TV

Setting channels automatically

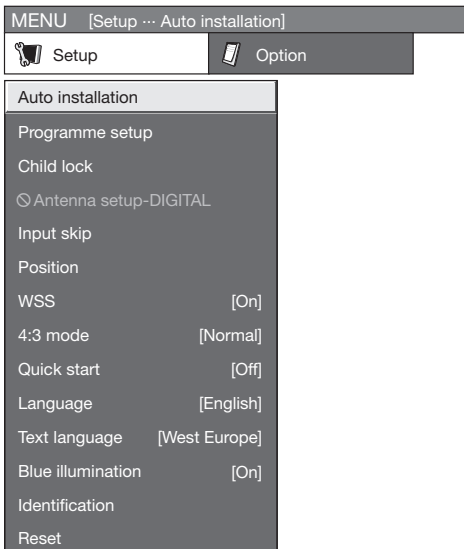
You can run auto installation again, even after setting up the preset channels.



1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select “Setup”.

3 Press **▲/▼** to select “Auto Installation”, and then press **ENTER**.



4 If you have already set the password, enter it here.

- See page 30 for setting a password.



5 Press **◀/▶** to select “Yes”, and then press **ENTER**.

6 Press **▲/▼** to select the desired language listed on the screen, and then press **ENTER**. Press **◀/▶** to select “Digital Search” or “Analogue Search”, and then press **ENTER**. You do not need to do anything during the auto search. Press **RETURN** to exit.

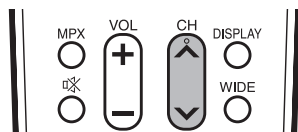
Watching TV

Selecting programmes

You can change channels in several ways.

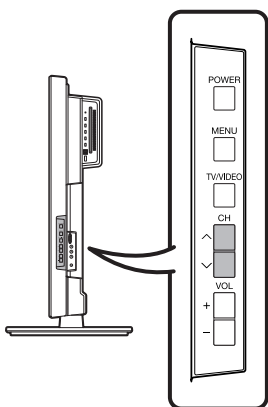
Using CH \wedge / \vee on the remote control unit

- Press **CH \wedge** to increase the channel number.
- Press **CH \vee** to decrease the channel number.



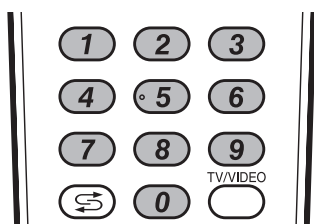
NOTE

- **CH \wedge / \vee** on the TV operates the same as **CH \wedge / \vee** on the remote control unit.



Using 0 – 9 on the remote control unit

Select the channels directly by pressing buttons **0** to **9**.



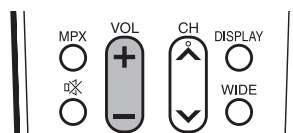
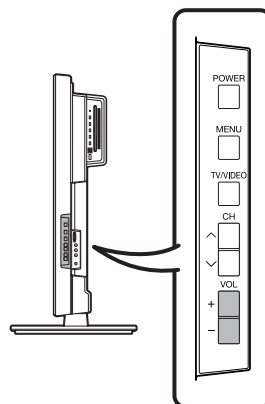
EXAMPLE

- To select a 1-digit channel (e.g. channel 2):
 - Press **0**, followed by **2**.
- To select a 2-digit channel (e.g. channel 12):
 - Press **1**, followed by **2**.
- To select a 3-digit channel (e.g. channel 020):
 - Press **0**, press **2**, followed by **0**.

When viewing Teletext information

View a page directly which is 3-digit page number from 100 to 899 by pressing buttons **0** to **9**.

Adjusting the volume



Changing the volume

You can change the volume on the TV or on the remote control unit.

- To increase the volume, press **VOL +**.
- To decrease the volume, press **VOL -**.



NOTE

- "TV", "Blu-ray", "INPUT1", "INPUT2", "INPUT3", "INPUT4", "INPUT5", "INPUT6" and "INPUT7" (PC) modes can store volume adjustment values separately.

Menu language settings

You can also select a language from setup menu. Select from among 3 languages: English, Simplified Chinese and Arabic.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press $\blacktriangleleft/\blacktriangleright$ to select "Setup".
- 3 Press $\blacktriangle/\blacktriangledown$ to select "Language", and then press **ENTER**.
- 4 Press $\blacktriangle/\blacktriangledown$ to select the desired language listed on the screen, and then press **ENTER**.

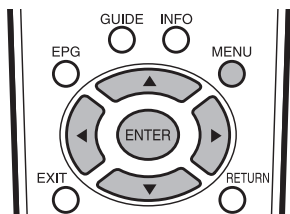
NOTE

- You cannot change language in "Blu-ray disc Setup" menu. In "Blu-ray disc Setup" menu, language is English only.

Watching TV

Setting channels to your preference

You can run the auto search procedure again at any time by accessing the Setup menu and Programme setup. Channels can be tuned automatically or manually.



Digital Settings

You can reconfigure DTV services settings automatically or manually.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select "Setup".
- 3 Press **▲/▼** to select "Programme setup", and then press **ENTER**. If you have already set the password, enter it here.
 - See page 30 for setting a password.
 The "Digital setting" screen displays and then press **ENTER**.
- 4 Press **▲/▼** to select the desired menu item, and then press **ENTER**.
- 5 Press **◀/▶** to select "Yes", and then press **ENTER**.

Additional search

Use this menu to add new services automatically after auto installation has been completed.

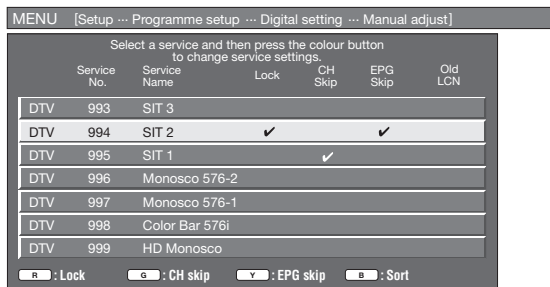
Manual search

Add new services within a specified frequency band.

- Enter the frequency using **0-9** numeric buttons.

Manual adjust

Configure various settings for each service using the Colour (**R, G, Y, B**) buttons.



- 1 Press **▲/▼** to select the desired service.

- 2 Press the colour button on the remote control corresponding with the item you want to reconfigure.

- The **✓** mark indicates the operation is set to on. Each time the colour button is pressed, you can switch the corresponding operation on/off.

Buttons for Manual Adjust operation

Menu items	Remote control buttons	Description
Lock	R	When the service is locked, you must enter your password whenever you tune to the service.
CH Skip	G	Services with a ✓ mark are passed over when pressing ▲/▼ in the TV/remote control unit.
EPG Skip	Y	Services with a ✓ mark are passed over in the Electronic Programme Guide (EPG).
Sort	B	The item position of services can be sorted.

The item position of services can be sorted

- ① Press **▲/▼** to select the service whose item position you want to move, and then press **B**.

DTV 994	SIT 2	✓	✓
DTV 995	SIT 1		✓

- ② Press **▲/▼** to move it to the desired position, and then press **ENTER**.

DTV 994	SIT 1	✓	
DTV 995	SIT 2	✓	✓

- ③ Repeat steps ① and ② until all desired service items are sorted.

Watching TV

Manual setting for each channel (Analogue)

You can set some channel items manually. They are Search, Fine (TV frequency), Colour sys., Sound sys., Label (Network name), Skip and Lock (Child Lock).

1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select "Setup".

3 Press **▲/▼** to select "Programme setup", and then press **ENTER**. If you have already set the password, enter it here.

- See page 30 for setting a password.

The "Analogue setting" screen displays and then press **ENTER**.

4 Press **▲/▼** to select "Manual Adjust", and then press **ENTER**.

5 Press **◀/▶** to select "Yes", and then press **ENTER**.

Programme Setup "Manual Adjust" menu

Please select channel to be edited

01 SAT.1	02 PR07	03 KABEL	04	05
06	07	08	09	10
11	12	13	14	15
16	17	18	19	20

Next

You can select one of the following settings.

- 1 **Search** (See page 25.)
- 2 **Fine** (See page 25.)
- 3 **Colour sys.** (See page 25.)
- 4 **Sound sys.** (See page 26.)
- 5 **Label** (See page 26.)
- 6 **Skip** (See page 26.)
- 7 **Lock** (See page 26.)

Search tuning

1 Press **▲/▼/◀/▶** to select the channel you want to edit, and then press **ENTER**.

- The selected channel information displays.

2 Press **▲/▼** to select "Search", and then press **ENTER**.

MENU [Setup -- Programme setup]

Search		Channel frequency settings
Fine	[179.25]	
Colour sys.	[Auto]	179.25 MHz
Sound sys.	[B/G]	
Label	[SAT.1]	Next
Skip	[Off]	Store
Lock	[Off]	Cancel

3 Press **▲/▼** to select item and press **ENTER**.

- **Next:** Search the next channel.
- **Store:** Memorise the current display channel.
- **Cancel:** Return to the previous screen. (The search result will not be stored.)

Fine tuning

1 Press **▲/▼/◀/▶** to select the channel you want to edit, and then press **ENTER**.

- The selected channel information displays.

2 Press **▲/▼** to select "Fine", and then press **ENTER**.

3 Press **◀/▶** to adjust the frequency, and then press **ENTER**.

- Adjust while checking the background picture as a reference.

Search		Channel frequency settings
Fine	[179.25]	
Colour sys.	[Auto]	179.25 MHz
Sound sys.	[B/G]	
Label	[SAT.1]	
Skip	[Off]	
Lock	[Off]	

- Instead of the method above, you can also set by directly entering the frequency number of the channel with **0 - 9**.
- When setting a frequency on the "Fine" screen, the last figure of the frequency needs to be "0" or "5".

EXAMPLE

- 179.25 MHz: Press **1 → 7 → 9 → 2 → 5**.
- 49.25 MHz: Press **4 → 9 → 2 → 5 → ENTER**.

Colour system

1 Press **▲/▼/◀/▶** to select the channel you want to edit, and then press **ENTER**.

- The selected channel information displays.

2 Press **▲/▼** to select "Colour sys.", and then press **ENTER**.

- Receivable colour systems are listed.

Colour system menu

Search		Colour system settings
Fine	[179.25]	
Colour sys.	[Auto]	Auto
Sound sys.	[B/G]	PAL
Label	[SAT.1]	SECAM
Skip	[Off]	
Lock	[Off]	

3 Press **▲/▼** to select the optimum colour system, and then press **ENTER**.

Manual setting for each channel (continued)

Sound system (Broadcasting system)

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **ENTER**.

- The selected channel information displays.

2 Press ▲/▼ to select “Sound sys.”, and then press **ENTER**.

- Receivable sound systems (Broadcasting systems) are listed.

Search		Sound system settings	
Fine	[179.25]		
Colour sys.	[Auto]	B/G	
Sound sys.	[B/G]	D/K	
Label	[SAT.1]	I	
Skip	[Off]		
Lock	[Off]		

3 Press ▲/▼ to select the optimum sound system, and then press **ENTER**.

Labelling channels

When a TV channel sends its Network Name, the auto installation detects the information and assigns a name to it. However, you can change individual channel names.

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **ENTER**.

- The selected channel information displays.

2 Press ▲/▼ to select “Label”, and then press **ENTER**.

- The alphabet and numbers are listed.

Search		Broadcasting station name settings	
Fine	[179.25]	S A T . 1	
Colour sys.	[Auto]		
Sound sys.	[B/G]		
Label	[SAT.1]	A B C D E F G H I J CLEAR	
Skip	[Off]	K L M N O P Q R S T BACK	
Lock	[Off]	U V W X Y Z + - . _	
		0 1 2 3 4 5 6 7 8 9 END	

3 Press ▲/▼/◀/▶ to select each character of the new name for the channel, and then press **ENTER**.

4 Repeat until the name is fully spelt out.

- The name can be 5 characters or less.
- When you want to set a channel name of less than 5 characters, select “END”.

Skipping channels

Channels with “Skip” set to “On” are passed over when using **CH**▲/▼ even if selected while watching the image from the TV.

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **ENTER**.

- The selected channel information will be displayed.

2 Press ▲/▼ to select “Skip”, and then press **ENTER**.

- Skip menu displays.

Search		Skip menu	
Fine	[179.25]	Channel skip settings	
Colour sys.	[Auto]	Off	
Sound sys.	[B/G]	On	
Label	[SAT.1]		
Skip	[Off]		
Lock	[Off]		

3 Press ▲/▼ to set “Skip” to “On”, and then press **ENTER**.

Setting the child lock

You can block the viewing of any channel.

1 Press ▲/▼/◀/▶ to select the channel you want to edit, and then press **ENTER**.

- The selected channel information displays.

2 Press ▲/▼ to select “Lock”, and then press **ENTER**.

- Child lock menu will be displayed.

Search		Lock menu	
Fine	[179.25]	Applies child lock to this channel	
Colour sys.	[Auto]	Off	
Sound sys.	[B/G]	On	
Label	[SAT.1]		
Skip	[Off]		
Lock	[Off]		

3 Press ▲/▼ to set “Lock” to “On”, and then press **ENTER**.

NOTE

- See page 30 for setting a password.
- If “Lock” is set to “On” for a channel, “Child lock has been activated RETURN: Input password” is displayed when you select the channel, and the image and sound of the channel is blocked.
- When pressing **RETURN** while “Child lock has been activated RETURN: Input password” is displayed, password input menu will be displayed. Inputting the correct password lifts the child lock temporarily until the power is turned off.

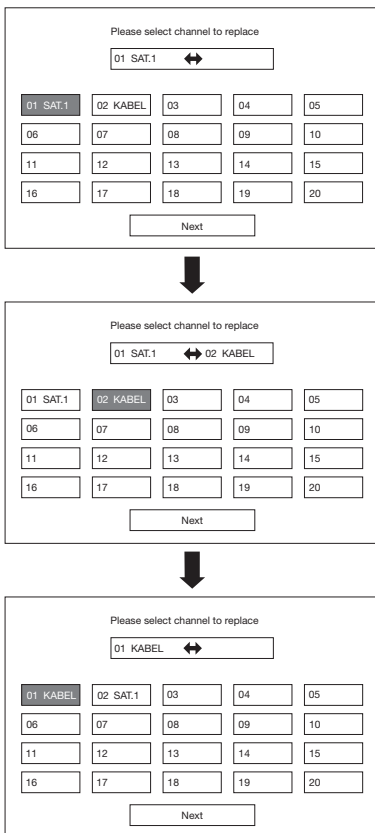
Watching TV

Sorting programmes

Channel positions can be sorted freely.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press ◀/▶ to select "Setup".
- 3 Press ▲/▼ to select "Programme setup", and then press **ENTER**. If you have already set the password, enter it here.
 - See page 30 for setting a password.
 The "Analogue setting" screen displays and then press **ENTER**.
- 4 Press ▲/▼ to select "Sort", and then press **ENTER**.
- 5 Press ◀/▶ to select "Yes", and then press **ENTER**.
- 6 Press ▲/▼/◀/▶ to select the channel you want to move, and then press **ENTER**.
- 7 Move it to the desired position by pressing ▲/▼/◀/▶, and then press **ENTER**.
- 8 Repeat the steps 6 and 7 until all desired channels are sorted.

Sort menus

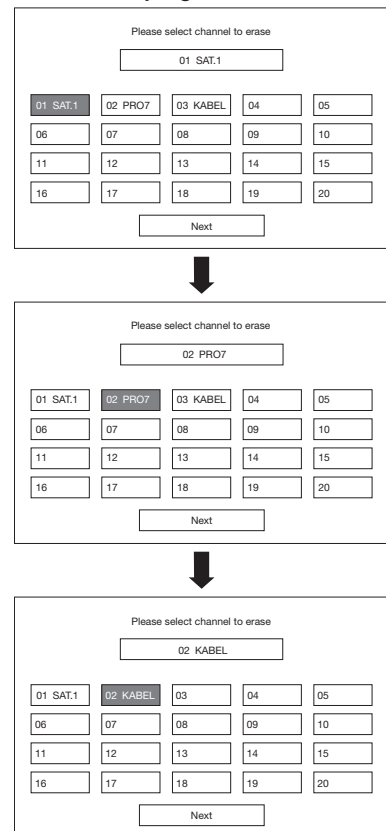


Erasing programmes

The individual programme can be erased.

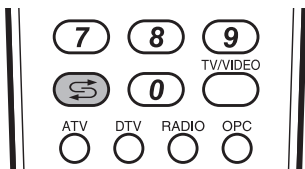
- 1 Press **MENU** and the MENU screen displays.
- 2 Press ◀/▶ to select "Setup".
- 3 Press ▲/▼ to select "Programme setup", and then press **ENTER**. If you have already set the password, enter it here.
 - See page 30 for setting a password.
 The "Analogue setting" screen displays and then press **ENTER**.
- 4 Press ▲/▼ to select "Erase programme", and then press **ENTER**.
- 5 Press ◀/▶ to select "Yes", and then press **ENTER**.
- 6 Press ▲/▼/◀/▶ to select the channel you want to erase, and then press **ENTER**.
 - A message screen pops up.
- 7 Press ◀/▶ to select "Yes", and then press **ENTER** to erase the selected programme. All the subsequent programmes move up.
- 8 Repeat the steps 6 and 7 until all desired channels are erased.

Erase programme menus



Useful viewing functions

Returning to the previously selected channel



Press to switch the currently tuned channel to the previously tuned channel.

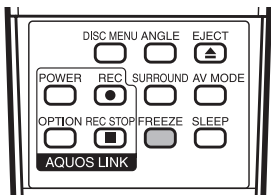
Press again to switch back to the currently tuned channel.

Press to toggle between the currently selected input source and the previously selected one.

Press to return to the previous page in TELETEXT mode.

Freezing the image

Allows you to capture and freeze one frame from a moving image that you are watching.



- 1 Press **FREEZE**.
 - Captures one frame from a moving image.

- 2 Press **FREEZE** again to cancel the function.

NOTE

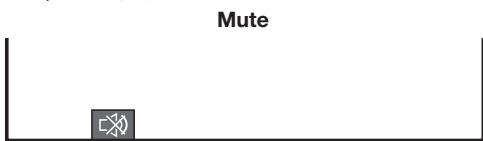
- The still image automatically goes out after 30 minutes.

Muting the audio temporarily

Using Mute () on the remote control unit

mutes the current sound output.

- 1 Press .
 - The sound is silenced.
 - "" is displayed while the mute function is on.



NOTE

- Within 30 minutes after pressing , press one of the buttons below to cancel the mute.
 - **VOL – /VOL +**
 -
- **Mute will be cancelled after 30 minutes. However, the TV will not suddenly output loud sound as the volume level will be set to 0 automatically. Increase the volume level by pressing VOL +.**

- 2 Press again within 30 minutes to cancel the mute.
 - Before 30 minutes, the volume level returns to the previous setting.

Outputting only audio

When listening to music from a music programme, you can set the display off and enjoy audio only.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press to select "Option".
- 3 Press / to select "Audio Only", and then press **ENTER**.
- 4 Press to select "On", and then press **ENTER**.

Selected item	Description
On	Audio is output without screen image.
Off	Both screen images and audio are output.

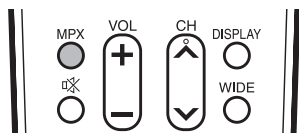
NOTE

- When you make operations that change the picture on the TV such as by changing the input source, the Audio Only function is set to "Off".

Watching TV

Switching the analogue audio format

You can switch between multiple audio modes when watching a multiple audio or stereo broadcast programme.

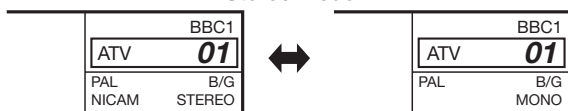


In the NICAM TV broadcasts

When receiving a stereo signal

Each time you press **MPX**, the mode switches between NICAM STEREO and MONO.

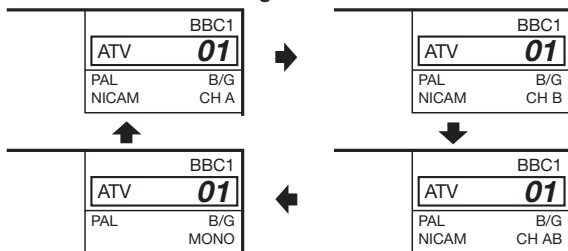
Stereo mode



When receiving a bilingual signal

Each time you press **MPX**, the mode switches among NICAM CH A, NICAM CH B, NICAM CH AB and MONO.

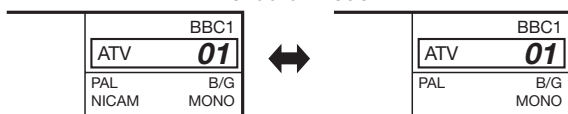
Bilingual mode



When receiving a monaural signal

Each time you press **MPX**, the mode switches between NICAM MONO and MONO.

Monaural mode

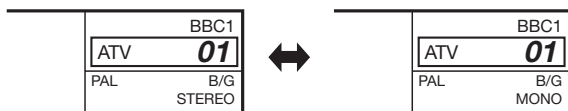


In the TV mode of A2 TV broadcasts

When receiving a stereo signal

Each time you press **MPX**, the mode switches between STEREO and MONO.

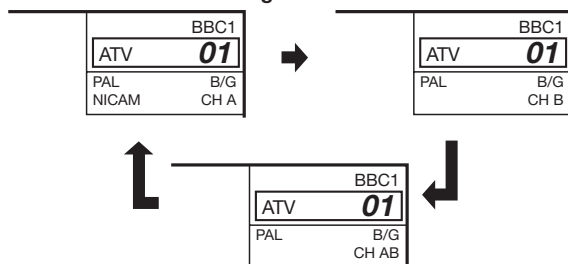
Stereo mode



When receiving a bilingual signal

Each time you press **MPX**, the mode switches among CH A, CH B and CH AB.

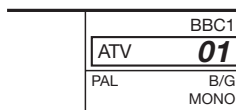
Bilingual mode



When receiving a monaural signal

When you press **MPX**, "MONO" displays.

Monaural mode



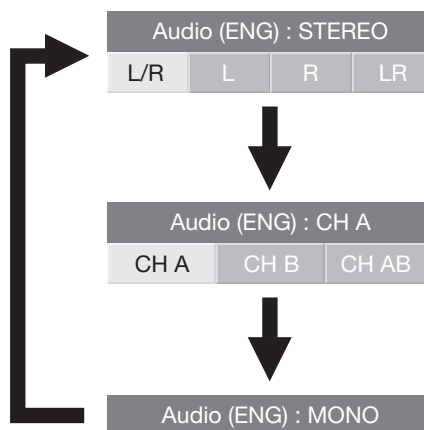
NOTE

- "BBC2", "99" and "PAL" are tentative network name, channel and colour system.

Switching the digital audio format

- If multi sound modes are received, each time you press **MPX** the mode switches as follows.

(Example)



- Press **◀▶** to select L or R sound when the STEREO or DUAL MONO screen is displayed.

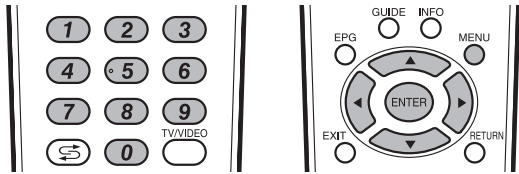


NOTE

- The sound mode screen disappears in 6 seconds.
- Selectable items vary depending on the received broadcasts.

Password setting for the child lock (for TV input mode)

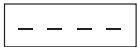
Allows you to use a password to protect certain settings from being accidentally changed.



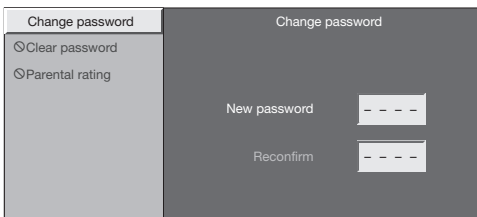
Setting a password

Register a 4-digit password number to use the Child Lock function.

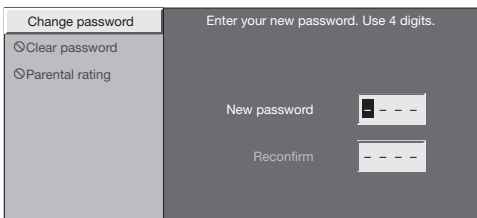
- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select “Setup”.
- 3 Press **▲/▼** to select “Child lock”, and then press **ENTER**.
- 4 If you have already set the password, enter it here.



- 5 Press **▲/▼** to select “Change password”, and then press **ENTER**.



- 6 Enter the 4-digit number as a password using **0 – 9**.



- 7 Enter the same 4-digit number as in step 6 to confirm.
 - “The new password was registered” displays.

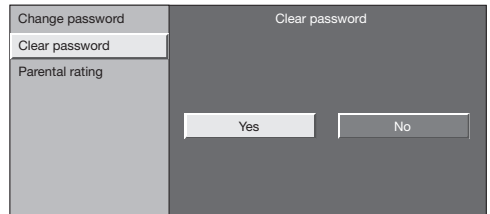
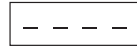
NOTE

- To view a locked channel (Lock setting in Programme setup “Manual adjust” is set to “On”), you must enter a password. (See page 26.) When you select a locked channel, a password prompt message pops up. Press **RETURN** to display the password input window.

Clearing the password

Allows you to clear your password.

- 1 Repeat steps 1 to 3 in **Setting a password**.
- 2 Enter the password.
- 3 Press **▲/▼** to select “Clear password”, and then press **ENTER**.
- 4 Press **◀/▶** to select “Yes”, and then press **ENTER**.



NOTE

- **As a precautionary measure, make a note of your password and keep it in a familiar place. If you lose or forget your password, initialise the TV to return all settings except for the TV channel settings to factory preset values. (See page 96.)**
- This function is only available for TV input mode.
- To relock a channel which has been temporarily unlocked by inputting the correct password, turn power off and then on again.

Watching TV

Parental rate

This function allows TV channels to be restricted. It prevents children from watching violent or sexual scenes that may be considered inappropriate.

1 Repeat steps 1 to 3 in **Setting a password**.

2 Press **▲/▼** to select “Parental rating”, and then press **ENTER**.

3 Press **▲/▼** to select your desired rating, and then press **ENTER**.

Selected item	Description
General and above (G)	Content is not offensive to most viewers.
Parental guidance and above (PG)	Content is such that parents may not want their children to view the programme.
Mature and above (M)	Mature audience only. This programme is specifically designed to be viewed by adults and therefore may be unsuitable for children under 15.
Mature adult and above (MA)	Mature adult only. This programme is specifically designed to be viewed by adults and therefore may be unsuitable for children under 15.
Adult violence and above (AV)	Not for children under age 15. Strong elements of sex and/or violence.
Restricted and above (R)	Not for children under age 18. Strong elements of sex and/or violence.
No block (-)	Cancel the blocking.

Programme title display

This function allows you to display programme information on the screen including the title and airtime by tuning a channel.

1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select “Option”.

3 Press **▲/▼** to select “Programme title display”, and then press **ENTER**.

4 Press **◀/▶** to select “Yes”, and then press **ENTER**.

NOTE

- The Programme title display function is only available for the DTV mode.

Key lock

This function allows you to lock the buttons on the TV or remote control in order to prohibit children from changing the channel or volume.

1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select “Option”.

3 Press **▲/▼** to select “Key lock”, and then press **ENTER**.

4 Press **▲/▼** to select “RC control lock” or “Button control lock”, and then press **ENTER**.

Selected item	Description
Off	Unlock the buttons.
RC control lock	Lock all buttons on the remote control.
Button control lock	Lock the TV buttons except the power switch.

NOTE

- You cannot set both “RC control lock” and “Button control lock” at the same time.

■ Cancelling the lock

To cancel “RC control lock” follow the below steps using the TV control panel buttons on the TV.

1 Press **MENU** on the TV and **VOL + /VOL -** to select “Option”.

2 Press **CH ▲/▼** to select “Key lock”, and then press **TV/VIDEO**.

3 Press **CH ▲/▼** to select “Off”, and then press **TV/VIDEO**.

NOTE

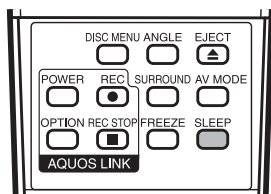
- See page 19 for the functions of the TV control panel buttons.
- **To cancel “Button control lock”, use the remote control.**

Watching TV

Energy conservation settings

Auto power-off at a designated time

This function is conveniently used when, for instance, going to bed while watching TV.



- 1 Press **SLEEP**.
 - Remaining time displays when sleep timer has been set.

Sleep Timer: Remain 2 hr. 00 min.

- 2 Each time you press **SLEEP**, the remaining time switches as shown below.

0 hr. 30 min. → 1 hr. 00 min. → 1 hr. 30 min.

↑ ↓

Off ← 2 hr. 30 min. ← 2 hr. 00 min.

NOTE

- When the time has been set, countdown automatically starts.
- Five minutes before the preset of time expires, the remaining time displays each minute.
- Select “Off” by pressing **SLEEP** to cancel the sleep timer.

ECO picture control

This function automatically detects the image source and decreases the power consumption while keeping the brightness of the image unchanged.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select “ECO”.
 - ECO menu displays.
- 3 Press **▲/▼** to select “ECO picture control”, and then press **ENTER**.
- 4 Press **◀/▶** to select “On” or “Off”, and then press **ENTER**.

NOTE

- This function does not work when “AV MODE” is set to “DYNAMIC (Fixed)” or “AUTO”.
- This function does not work when “Energy save” is set to “Standard” or “Advanced”.

Energy save

This function enables you to automatically reduce the backlight brightness in order to decrease the power consumption and increase the backlight life span.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select “ECO”.
 - ECO menu displays.
- 3 Press **▲/▼** to select “Energy save”, and then press **ENTER**.
- 4 Press **▲/▼** to select “Standard” or “Advanced”, and then press **ENTER**.

Selected item	Description
Standard	Reduces the backlight brightness by 25%.
Advanced	Reduces the backlight brightness by 50%.
Off	The backlight brightness is the same value of your settings in the selected “AV MODE”.

Blu-ray disc Ecology

You can control the power on/off status of the Disc Drive when power to the TV is on.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select “ECO”.
 - ECO menu displays.
- 3 Press **▲/▼** to select “Blu-ray disc Ecology”, and then press **ENTER**.
- 4 Press **◀/▶** to select “Enable” or “Disable”, and then press **ENTER**.

Selected item	Description
Enable	Power to Disc Drive is turned on when a disc is inserted or when the input source is switched to Blu-ray.
Disable	Power to Disc Drive is turned on when TV power is turned on.

Watching TV

Auto power-off after the end of broadcast

You can set the TV to automatically power off in about 15 minutes after the TV goes into a state of receiving no programme signals, such as the end of a broadcast day.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select "ECO".
 - ECO menu displays.
- 3 Press **▲/▼** to select "No signal off", and then press **ENTER**.
- 4 Press **◀/▶** to select "Enable", and then press **ENTER**.
 - Five minutes before the power shuts down, the remaining time displays every minute.

NOTE

- "Disable" is the factory preset value.
- When a TV programme finishes, this function may not operate.

Auto power-off when there are no operations performed

You can set the TV to automatically power off when no TV operation is performed for more than 3 hours.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select "ECO".
 - ECO menu displays.
- 3 Press **▲/▼** to select "No operation off", and then press **ENTER**.
- 4 Press **▲/▼** to select "30min." or "3hr.", and then press **ENTER**.
 - Five minutes before the power shuts down, the remaining time displays every minute.

NOTE

- "Disable" is the factory preset value.

Quick start

You can reduce the TV's start-up time after turning on the power with the remote control unit.

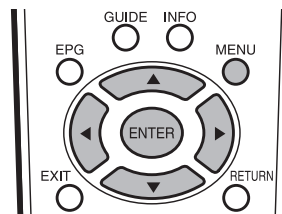
- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select "Setup".
- 3 Press **▲/▼** to select "Quick start", and then press **ENTER**.
- 4 Press **◀/▶** to select "On" or "Off", and then press **ENTER**.

Selected item	Description
On	The TV quickly starts up from standby, 19 W or more of power consumption is required during standby.
Off	Power consumption is less than 1 W.

Picture size settings

Selecting the Wide Screen Signalling (WSS) picture size automatically

WSS allows a television to switch automatically among the different screen formats.



- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select "Setup".
- 3 Press **▲/▼** to select "WSS", and then press **ENTER**.
- 4 Press **◀/▶** to select "On" or "Off", and then press **ENTER**.

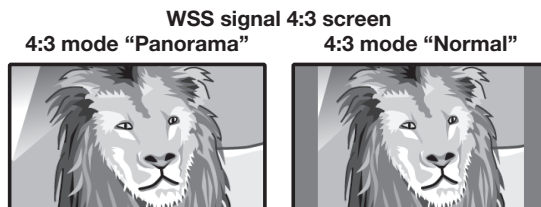
NOTE

- Try to set WIDE mode if an image does not switch to the correct screen format. When the broadcast signal contains no WSS information, the function will not work even if enabled.

Selecting the Wide Screen Signalling (WSS) picture size manually

The WSS signal has 4:3 auto-switching that allows you to select between Panorama and Normal.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select "Setup".
- 3 Press **▲/▼** to select "4:3 mode", and then press **ENTER**.
- 4 Press **◀/▶** to select "Panorama" or "Normal", and then press **ENTER**.

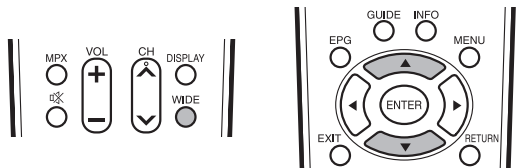


Selected item	Description
Panorama	Wide image without side bars
Normal	Normal range keeping 4:3 or 16:9 aspect ratio

Selecting the picture size manually

Manual Selection

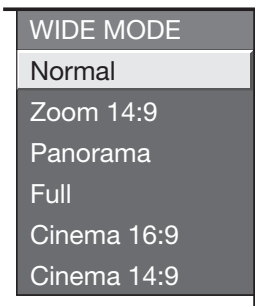
You can select different picture sizes that account for the kind of each picture.



1

Press **WIDE**.

- The WIDE MODE menu displays.
- The menu lists the wide mode options selectable for the type of video signal currently received.



2

Press **WIDE** or **▲/▼** while the WIDE MODE menu displays on the screen.

- As you toggle down the options, each mode is immediately reflected on the TV.

Auto Selection

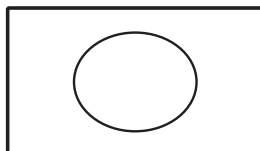
If you set “WSS” and “4:3 Mode” in the Setup menu on page 33, the optimum WIDE mode is automatically chosen for every broadcast containing the WSS information.

“WSS” menu

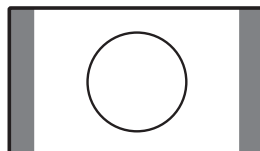
To enable Auto Selection, set “WSS” in the Setup menu to “On”. (See page 33.)

“4:3 Mode” menu

To set the type of the wide screen, select “Panorama” or “Normal” in the 4:3 Mode menu. (See page 33.)



4:3 Mode set to “Panorama”

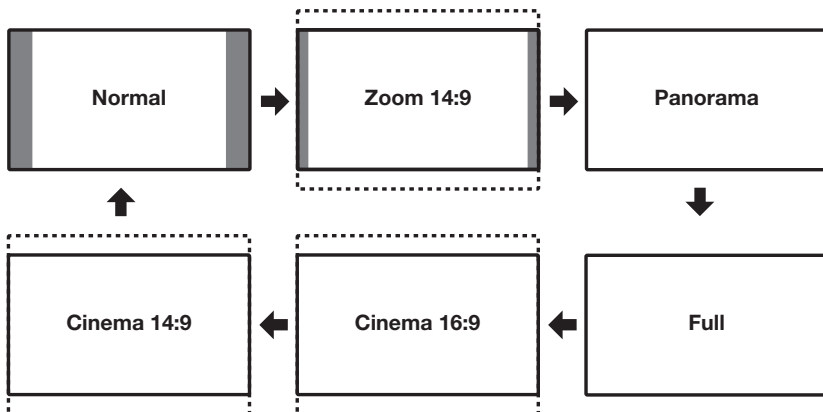


4:3 Mode set to “Normal”

NOTE

- If the broadcast signal contains no WSS information, Auto Selection will not function even when the WSS option is enabled.

Selected item	Description
Normal	For 4:3 “standard” pictures. A side bar appears on each side.
Zoom 14:9	For 14:9 letterbox pictures. A thin side bar appears on each side, and you may also see bars on the top and bottom with some programmes.
Panorama	In this mode the picture is progressively stretched toward each side of the screen.
Full	For 16:9 squeeze pictures.
Cinema 16:9	For 16:9 letterbox pictures. Bars may appear on the top and bottom with some programmes.
Cinema 14:9	For 14:9 letterbox pictures. Bars may appear on the top and bottom with some programmes.
Dot by Dot	Displays an image with the same number of pixels on the screen (only when receiving a 1080i/1080p signal).
Underscan	Display with an Underscan image only when receiving a 720p signal. Display with the High-Definition image adjusted optimally. Noise may appear on the edge of the screen with some programmes.



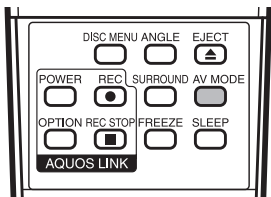
NOTE

- Some picture sizes may not be displayable depending on the input signal.

Selecting a preset AV MODE

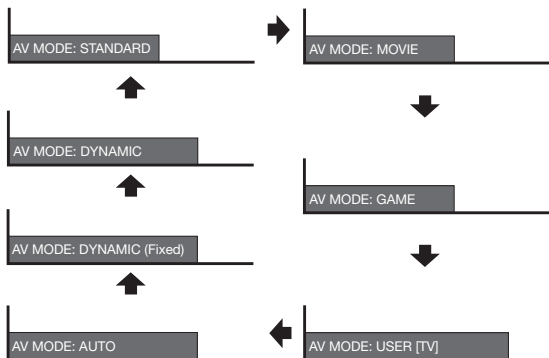
The AV MODE function enables you to select appropriate settings for audio and video to account for the system environment which can vary due to factors like room brightness, type of programme watched or the type of image input from external equipment.

Using AV MODE on the remote control unit

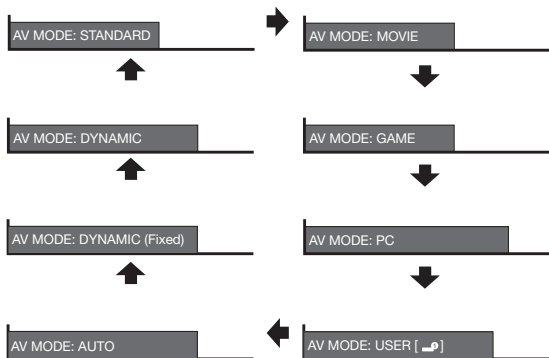


- 1 Press **AV MODE**.
 - Present AV MODE displays.
- 2 Press **AV MODE** again before the mode displayed on the screen disappears.
 - The mode changes as shown below.

When the input source is TV, Blu-ray, INPUT4, 5 or 6 terminal (Example)



When the input source is INPUT1, 2, 3 or 7 terminal (Example)



Selected item	Description
STANDARD	For a highly defined image in a normally bright room.
MOVIE	For a movie.
GAME	Lowers image brightness for easier viewing.
PC*	For PC. (Available only when inputting an HDMI or RGB signal.)
USER	Allows the user to customise settings as desired. You can set the mode for each input source.
AUTO	The TV automatically sets the appropriate selection from the "AV MODE" menu depending on the lighting conditions and the type of programme watched.
DYNAMIC (Fixed)	Changes the image and sound settings to the factory preset values. No adjustments are allowed.
DYNAMIC	For a clear-cut image emphasising high contrast for sports viewing.

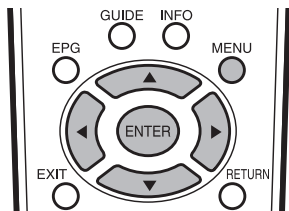
NOTE

- The item marked with * is available only when selecting "INPUT1", "INPUT2", "INPUT3" or "INPUT7" from the INPUT SOURCE menu.
- If you select "AUTO", some selections in the "AV MODE" menu may not be automatically set.

Manual picture settings

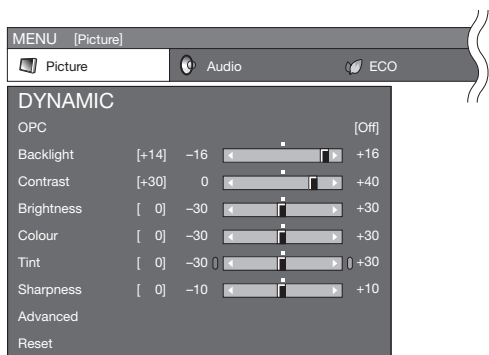
Picture adjustment

You can adjust the picture to your preference. Follow the steps to adjust the picture.



1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select “Picture”.



3 Press **▲/▼** to select the desired menu item. Press **ENTER** to proceed if necessary.

4 Press **▲/▼** or **◀/▶** to select the desired item or adjust the item to the desired level. Press **ENTER** if necessary.

NOTE

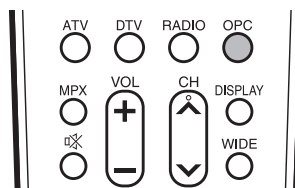
- For resetting all adjustment items to factory preset values, press **▲/▼** to select “Reset”, press **ENTER**, press **◀/▶** to select “Yes”, and then press **ENTER**.
- Select “Advanced” and then press **ENTER** to set “C.M.S.-hue”, “C.M.S.-saturation”, “C.M.S.-value”, “Colour temp.”, “Fine motion advanced”, “Film mode”, “Active contrast”, “DNR”, “3D-Y/C”, “Monochrome” or “Range of OPC”. See page 37 and 38.

Selected item	◀ button	▶ button
OPC	Sets whether or not the screen brightness is automatically adjusted according to the lighting condition in the room. (OPC setting: See this page.)	
Backlight	The screen dims	The screen brightens
Contrast	For less contrast	For more contrast
Brightness	For less brightness	For more brightness
Colour	For less colour intensity	For more colour intensity
Tint	Skin tones become purplish	Skin tones become greenish
Sharpness	For less sharpness	For more sharpness
Advanced	For finer picture adjustments. (See page 37 and 38.)	
Reset	Resets all picture adjustment items to the factory preset values.	

OPC (Optical Picture Control) setting

You can set the TV to automatically adjust the screen to suitable backlight brightness according to the lighting conditions.

Using OPC on the remote control unit



Press **OPC** to switch the OPC function on or off.

Using OPC on the menu screen

Selected item	Description
Off	The brightness is fixed at the value set in “Backlight” (See this page).
On	Automatically adjusts.
On: Display	Displays the OPC effect on the screen while adjusting the brightness of the screen.

NOTE

- Make sure no object obstructs the OPC sensor, which could affect its ability to sense surrounding light.

Watching TV

Advanced picture settings

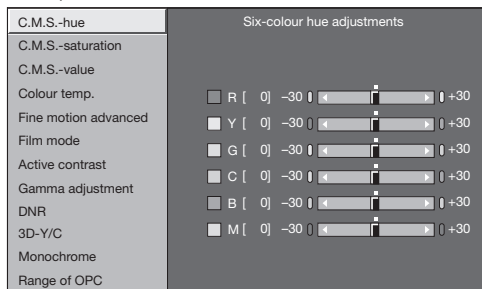
The advanced settings enable you to set the picture adjustment in more detail. There are twelve options you can choose from.

1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select "Picture".

3 Press **▲/▼** to select "Advanced", and then press **ENTER**.

4 Press **▲/▼** to select the desired menu, and then press **ENTER**.



5 Press **▲/▼** or **◀/▶** to select the desired level, and then press **ENTER**.

■ C.M.S.-hue

This function adjusts the hue of a selected colour using a six-colour adjustment system.

■ C.M.S.-saturation

This function increases or decreases the saturation of a selected colour using a six-colour adjustment system.

■ C.M.S.-value

This function makes the image brighter or darker depending on the value of the setting.

■ Colour Temp. (Colour temperature)

Adjusts the colour temperature to give the best white image.

Selected item	Description
High Mid-High Middle Mid-Low Low	White with bluish tone ↑↓ White with reddish tone
R/G/B Gain (LO), R/G/B Gain (HI)	Adjusts the white balance by changing the value of each item.

■ Fine Motion Advanced

Use Fine Motion Advanced to view fast-action images more clearly.

Selected item	Description
On	For obtaining a clear image
Off	No adjustment

■ Film Mode

Automatically detects a film-based source (originally encoded at 24/25 frames/second, depending on the vertical frequency), analyses it then recreates each still film frame for high-definition picture quality.

Selected item	Description
Advanced (High)	Display moving picture more smoothly with high quality.
Advanced (Low)	Display moving picture smoothly with high quality.
Standard	Display every picture frame in equal time, feeling like watching in cinema.
Off	Film mode off.

NOTE

- Film mode is not selectable depending on the input signal type.

■ Active contrast

Automatically adjusts the contrast of an image according to the scene.

■ Gamma adjustment

Adjust mid-level brightness. The adjustment range of the gamma can be set to a maximum of +2 and a minimum of -2 by pressing **◀** or **▶**.

■ DNR (Digital Noise Reduction)

Reduces noise on screen and produces a clearer video image. ("Auto", "High", "Middle", "Low", "Off").

■ 3D-Y/C

Provides high quality images with minimal dot crawl and cross colour noise.

Selected item	Description
Standard	Normal adjustment
Fast	Set the optimum image quality for fast-moving images.
Slow	Set the optimum image quality for slow-moving images.

NOTE

- 3D-Y/C is not selectable depending on the input signal type.
- 3D-Y/C may not operate depending on the input signal type or noisy input signal.

■ Monochrome

For viewing images in monochrome.

Range of OPC

The brightness level range of the OPC sensor's automatic adjustments can be set according to your preferences. The adjustment range of the OPC sensor can be set to a maximum of +16 and a minimum of -16.

Selected item	Description
Max.	-15 through +16
Min.	-16 through +15

NOTE

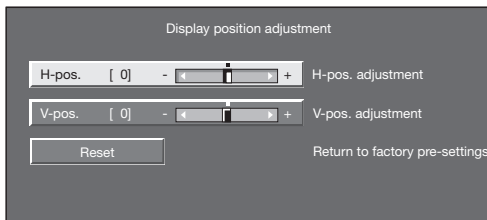
- This function is available only when the OPC setting is set to On or On: Display.
- The maximum setting cannot be set to a smaller number than the minimum setting.
- The minimum setting cannot be set to a bigger number than the maximum setting.
- The maximum and minimum settings cannot be set to the same number.
- Depending on the brightness of the surrounding light, the OPC sensor might not operate if the adjustment range is small.

Other picture settings

Adjusting the image position

For adjusting a picture's horizontal and vertical position.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select "Setup".
- 3 Press **▲/▼** to select "Position", and then press **ENTER**.
- 4 Press **▲/▼** to select "H-pos." or "V-pos.".



Selected item	Description
H-pos.	Centres the image by moving it to the left or right.
V-pos.	Centres the image by moving it up or down.

- 5 Press **◀/▶** to adjust the item to your desired position.

NOTE

- For resetting all adjustment items to the factory preset values, press **▲/▼** to select "Reset", and then press **ENTER**.
- **Adjustments are stored separately according to input source.**
- Depending on the input signal type or "WIDE MODE" setting, a position setting may not be available.

Game play time

This function displays the elapsed game time so you do not lose track of the time.

To display the elapsed time, select "GAME" under "AV MODE" for the input mode of the terminal connected to the game console before starting the game.

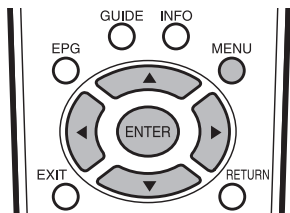
- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select "Option".
- 3 Press **▲/▼** to select "Game play time", and then press **ENTER**.
- 4 Press **◀/▶** to select "On", and then press **ENTER**.

Selected item	Description
On	The elapsed time is displayed every 30 minutes when you switch to GAME mode in external input mode.
Off	No adjustment

Indicating time on the screen

Time display

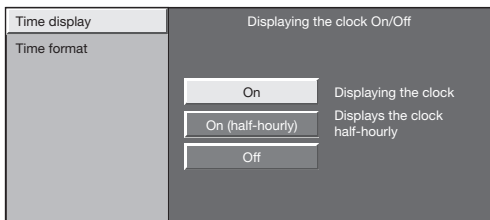
This function allows you to display the clock time on the lower right screen.



1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select “Option”.

3 Press **▲/▼** to select “Time display” and then press **ENTER**.



4 Press **▲/▼** to select “Time display” and then press **ENTER**.

5 Press **▲/▼** to select “On” or “On (half-hourly)” and then press **ENTER**.

Selected item	Description
On	Display the clock time.
On (half-hourly)	Display the clock time in 30 minutes increments.
Off	Hide the clock time.

Time format

You can select the time format (either 24HR or AM/PM) for the clock time.

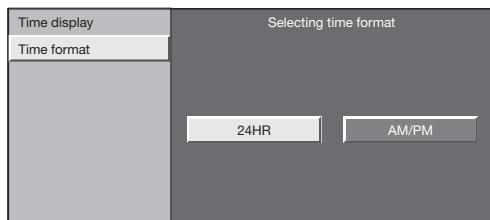
1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select “Option”.

3 Press **▲/▼** to select “Time display” and then press **ENTER**.

4 Press **▲/▼** to select “Time format” and then press **ENTER**.

5 Press **◀/▶** to select the desired time format, and then press **ENTER**.



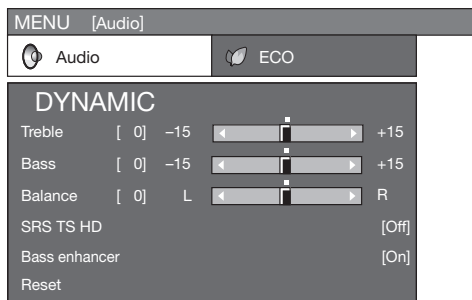
Watching TV

Audio adjustment

You can adjust the audio of the selected AV mode.

1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select “Audio”.



3 Press **▲/▼** to select the desired menu item. Press **ENTER** to proceed if necessary.

4 Press **▲/▼** or **◀/▶** to select the desired item or adjust the item to the desired level. Press **ENTER** if necessary.

Selected item	◀ button	▶ button
Treble	For weaker treble	For stronger treble
Bass	For weaker bass	For stronger bass
Balance	Increase audio from the left speaker	Increase audio from the right speaker

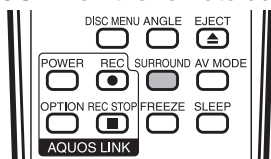
NOTE

- For resetting all adjustment items to the factory preset values, press **▲/▼** to select “Reset”, press **ENTER**, press **◀/▶** to select “Yes”, and then press **ENTER**.

SRS TruSurround (TS) HD

You can enjoy SRS TruSurround HD™ sound, the same as you were in movie theatre.

Using **SURROUND** on the remote control unit



Press **SURROUND** to switch the SRS TS HD function on or off.

Using SRS TS HD on the menu screen

You can produce SRS TruSurround HD effects from the “Audio” setting.

Selected item	Description
On	TruSurround HD creates a high quality surround sound experience, when watching DVD movies and TV programmes broadcast in surround sound.
Off	Outputs the normal sound.

Bass enhancer

This function allows you to enjoy bass-enhanced sound.

1 Repeat steps 1 to 2 in **Audio adjustment**.

2 Press **▲/▼** to select “Bass enhancer”, and then press **ENTER**.

3 Press **◀/▶** to select “On”, and then press **ENTER**.

Selected item	Description
On	Bass enhancer function is on.
Off	Outputs the normal sound.

Output volume select

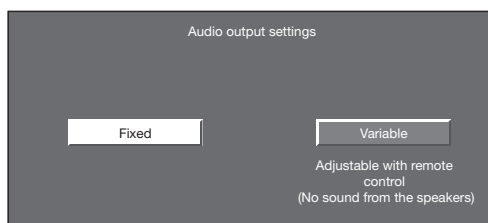
Allows you to select what controls the audio output.

1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select “Option”.

3 Press **▲/▼** to select “Output volume select”, and then press **ENTER**.

4 Press **◀/▶** to select “Fixed” or “Variable”, and then press **ENTER**.



Selected item	Description
Fixed	<ul style="list-style-type: none"> Sound via speakers is adjusted with VOL +/- on the remote control unit or the TV. Sound via the MONITOR OUT terminal is not adjustable and constantly outputs.
Variable	<ul style="list-style-type: none"> Sound via the MONITOR OUT terminal is adjusted with VOL +/- on the remote control unit or the TV. Sound via speakers is muted.

Watching TV

Automatic volume adjustment

Different sound sources sometimes do not have the same volume level, such as a programme and its commercial breaks. The Automatic volume control (Auto volume) reduces this problem by equalizing levels.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select “Option”.
- 3 Press **▲/▼** to select “Auto volume”, and then press **ENTER**.
- 4 Press **◀/▶** to select “On”, and then press **ENTER**.

Clear voice

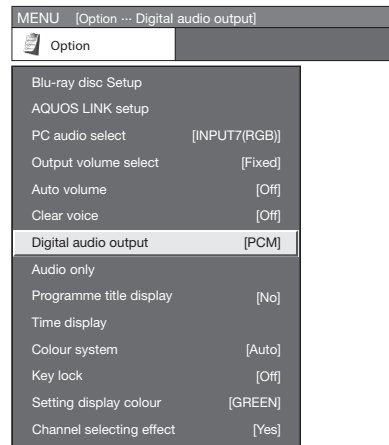
This function emphasises speech against background noise for greater intelligibility.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select “Option”.
- 3 Press **▲/▼** to select “Clear voice”, and then press **ENTER**.
- 4 Press **◀/▶** to select “On”, and then press **ENTER**.

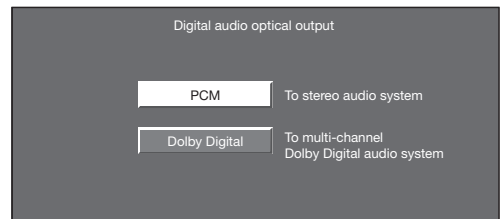
Digital audio output

This function allows you to select your favourite audio output system of DTV. (Digital Audio Out of BD is in Blu-ray disc Setup menu. See page 65.)

- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select “Option”.
- 3 Press **▲/▼** to select “Digital audio output”, and then press **ENTER**.



- 4 Press **▲/▼** to select your desired output system, and then press **ENTER**.

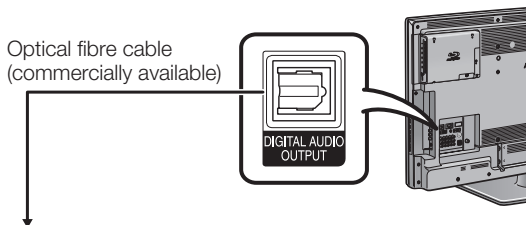


Selected item	Description
PCM	The optical output format is normally in PCM.
Dolby Digital	Dolby Digital audio will be output when there is a Dolby Digital audio signal. The output will be in PCM when there is no Dolby Digital audio signal.

Watching TV

Using Digital Audio Output

It is possible to output audio through the DIGITAL AUDIO OUTPUT terminal. PCM audio outputs from the terminal.



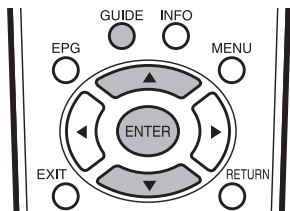
To optical digital input of external audio devices

NOTE

- The DIGITAL AUDIO OUTPUT terminal usually outputs the same audio from the speakers. (The audio of the content you are viewing is output from the terminal.)
- The DIGITAL AUDIO OUTPUT terminal does not output some signals, depending on devices and software.

Programme Guide

You can check the current schedule of DTV events and view detailed information about current events.



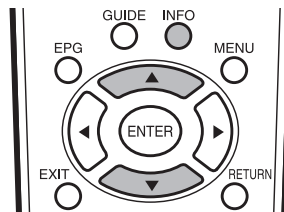
- 1 Press **GUIDE** to display the programme guide list.

- 2 Press **▲/▼** to display your desired programme, and then press **ENTER**.
 - When you press **ENTER**, the TV jumps to the channel.

CH LIST [DTV-TV]		[Mon]19/6 9:29
002	ABC TV Sydney Global Grover	9:23 - 9:29
▲ 002	ABC TV Sydney Global Grover	
003	SBS	
004	FTV Guide	
009	NINE DIGITAL	
010	TEN DIGITAL	
011	TEN Guide	
012	TEN HD	
020	ABC HDTV Global Grover	
021	ABC 2 ABC Asia Pacific News	
022	ABC TV Global Grover	
030	SBS HD	
▼ 031	SBS 2	

Info

While watching DTV you can check the extended programme information on the screen using **INFO** on the remote control.



ABC TV Sydney

Dorothy The Dinosaur

15:23 - 15:30

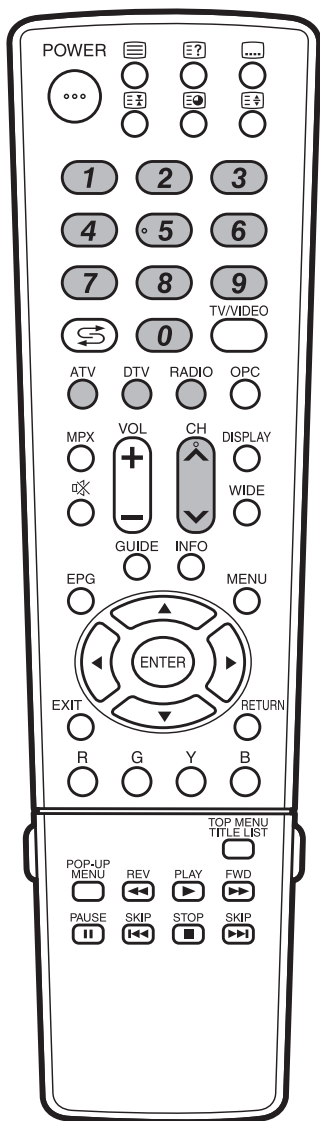
Programme Info.

Dorothy's friends chat over Rosy Tea before admiring her beautiful Rose Garden, with Wags the Dog, Henry the Octopus and Captain Feathersword, and four new fairy friends, Clare, Larissa, Lucia and little

- If there is more information, pressing **▲/▼** allows you to go to the next page or return to the previous page.
- You can cancel this info by pressing **INFO** again.

ATV (Analogue)/DTV/RADIO buttons

Use the following buttons on the remote control to operate the menu.



ATV: Press to switch to ATV (Analogue TV) mode. After switching from DTV, radio or external input mode to analogue mode, the TV jumps to the most recently viewed analogue channel.

DTV: Press to switch to DTV (Digital TV) mode. After switching from analogue, radio or external input mode to DTV mode, the TV jumps to the most recently viewed DTV channel.

RADIO: Press to switch to radio mode. After switching from DTV to radio mode, the TV jumps to the most recently tuned radio channel. (DTV mode only)

When you watch the TV for the first time

When the TV powers on for the first time after purchase, perform the auto installation.

ATV (Analogue TV)

You can run the auto installation to set channels automatically.

- 1 To watch the analogue TV, select "Auto Installation" from Setup menu. (See page 22.)
- 2 After setting the channels, you can select a channel using **CH** \wedge/\vee or **0-9** on the remote control unit. (See page 23.)

DTV (Digital TV)

When the TV accesses to DTV (Digital TV) mode for the first time, you need to run the auto search. To scan all available services in your area, follow the procedures below.

- 1 To watch DTV broadcasts, select "Digital Search" from auto installation menu. (See page 12.)
- 2 After setting the channels, you can select a channel using **CH** \wedge/\vee or **0-9** on the remote control unit. (See page 23.)

Watching TV

EPG

What is an EPG?

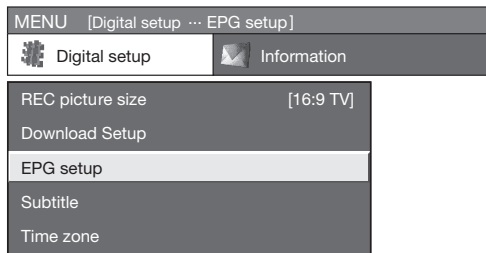
An “EPG (Electronic Programme Guide)” is a programme schedule, which is displayed on the TV screen. The EPG is broadcasted together with DTV. The TV screen shows the EPG when the viewer presses **EPG** on the remote control, provided that the TV is receiving the digital broadcasting signal. The EPG enables you to search for a programme, do timer recording or view the programme schedule in detail.

EPG display settings

EPG (Electronic Programme Guide) is a programme list that is displayed on the screen. With the EPG, you can check the schedule of DTV/RADIO/DATA, view detailed information about them, tune to an event currently on-air and set a timer for future events.

1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select “Digital setup”.



3 Press **▲/▼** to select “EPG setup”, and then press **ENTER**.

4 Press **▲/▼** or **◀/▶** to select the desired item or adjust the item to the desired level. Press **ENTER** if necessary.

EPG setup (setting for receiving EPG data)

EPG setup must be selected to “YES” to enable automatic capturing of data for all available channels while the TV set is in standby mode. If EPG setup is set to “NO”, only EPG data for the current channel will be updated.

Selecting EPG setup to “YES” will result in higher power consumption*.

Selecting EPG setup to “NO” will save power consumption.

NOTE

- * Approximately 19W for 15-30 minutes (depending on number of channels tuned) after power off from remote control.
- EPG data will not update if the TV is turned off from the mains power switch.

Display range setup

The Display range setup allows you to select three types of time spans for display on the screen.

Selected item	Description
Mode1 (Wide angle)	Display six hours of programme information.
Mode2 (Zoom)	Display three hours of programme information.
Mode3 (Vertical angle)	Change to the EPG display format with a vertical time span.

Genre icon setup

You can grey out or place a mark on desired genres and smoothly search for programmes you frequently watch.

Genre icon list

Icon	Genre	Icon	Genre
	Movie		Arts/Culture
	News		Current Affairs
	Entertainment		Education/Information
	Sport		Infotainment
	Children's		Comedy
	Music		Drama

NOTE

- You can easily distinguish the Genre icons by darkening or lightening the icon's shade.

Time zone

This function enables you to select your local time zone.

1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select “Digital setup”.

3 Press **▲/▼** to select “Time zone”, and then press **ENTER**.

4 Press **▲/▼** to select the desired time zone and then press **ENTER**.

- This function lets you select the right time zone in case the time displayed in the EPG does not match the local time of your area.

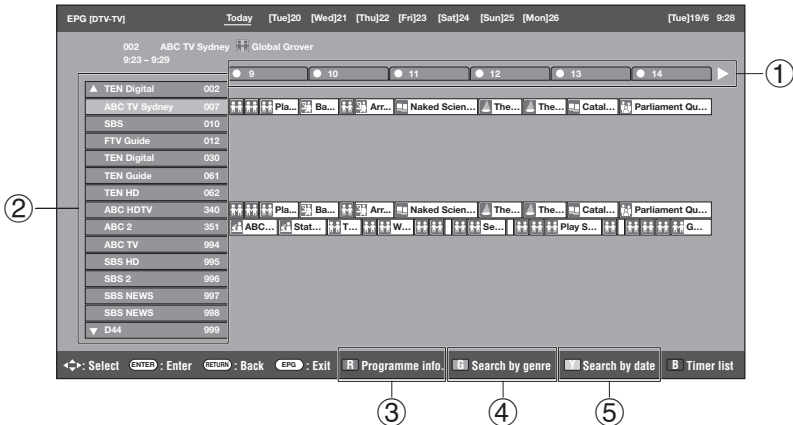
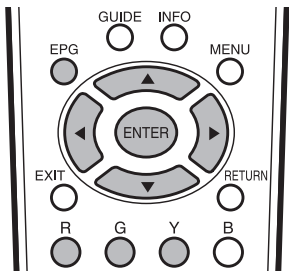
Watching TV

Selecting a programme using EPG

Basic Operation

Display the EPG screen

Press **EPG**.



Display the EPG screen

① Press **◀/▶** to select the time span you want to search.

- Continue to press **▶** to display programmes in the next time span.

② Press **▲/▼** to select the desired programme.

- If **▲** or **▼** are displayed on the left of the services, continue to press **▲/▼** to display next or previous screen.

Close the EPG screen

Press **EPG** again.

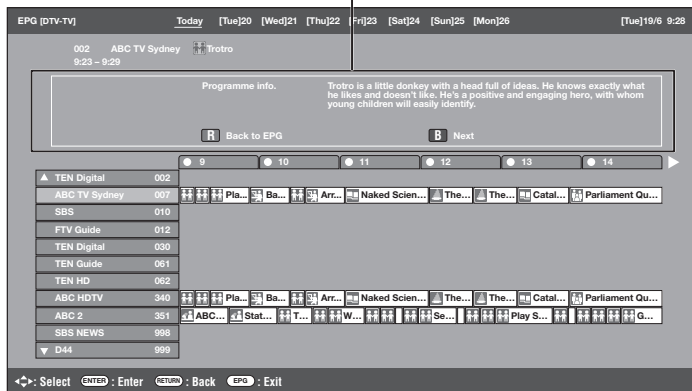
Selecting a programme

③ Check programme information

1 Press **▲/▼/◀/▶** to select the programme you want to check.

2 Press **R**.

Programme Information

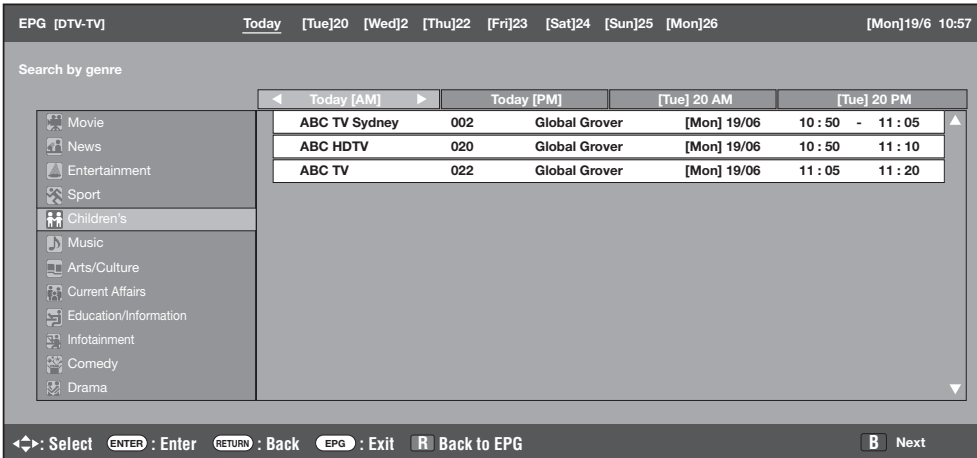


3 Press **ENTER** to tune to the selected programme.

Watching TV

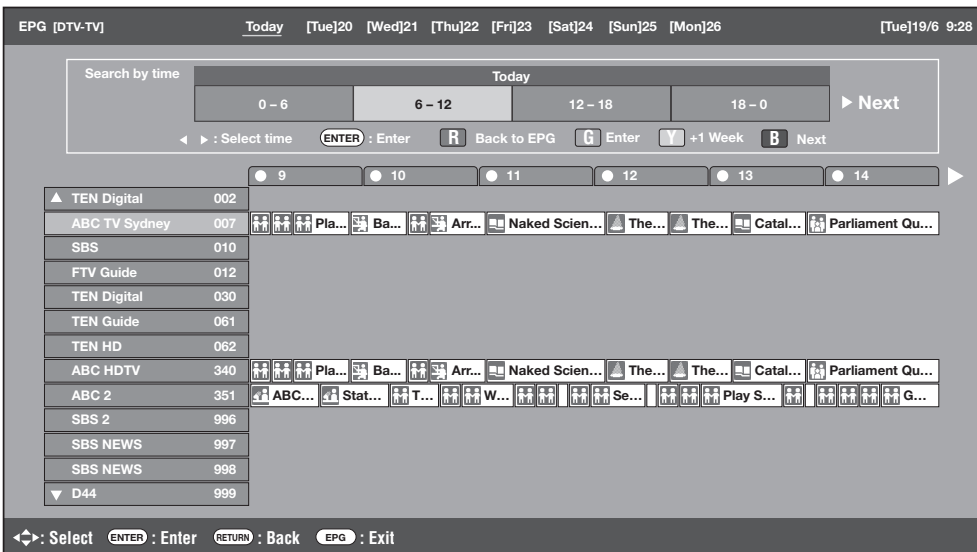
④ Search a programme in a category

- 1 Press **G**.
- 2 Press **▲/▼** to select the desired genre, and then press **ENTER**.
- 3 Press **▲/▼** to select a programme you want to watch, and then press **ENTER**.



⑤ Search for a programme by date/time

- 1 Press **Y**.
- 2 Press **◀/▶** to select the desired time span and then press **ENTER**.



- 3 Press **▲/▼** to select the desired programme, and then press **ENTER**.

NOTE

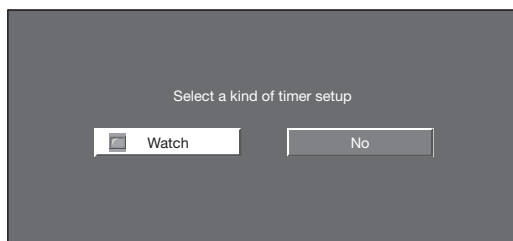
- When you select a programme outside of the current time span, the timer setting screen displays. (Page 47)

Watching TV

Timer setting using EPG

You can select TV programmes using data from the EPG.

- 1 Press **EPG**.
- 2 Press **▲/▼/◀/▶** to select the programme you want to set, and then press **ENTER**.
- 3 Press **◀/▶** to select the timer setting, and then press **ENTER**.



- If you select "No", the TV returns to the EPG screen.

■ Selecting "Watch" in the timer setup screen

This setting allows you to switch to a programme at a set time.

- ① Press **◀/▶** to select "Watch", and then press **ENTER**.
- ② Press **◀/▶** to select "Yes", and then press **ENTER**.
 - The selected TV programme is marked with an icon.

Cancelling the timer setting

- 1 Press **EPG**.
- 2 Press **▲/▼/◀/▶** to select the programme on timer setup, and then press **ENTER**.
- 3 Press **◀/▶** to select "Cancel", and then press **ENTER**.

■ Cancelling using B button on the remote control

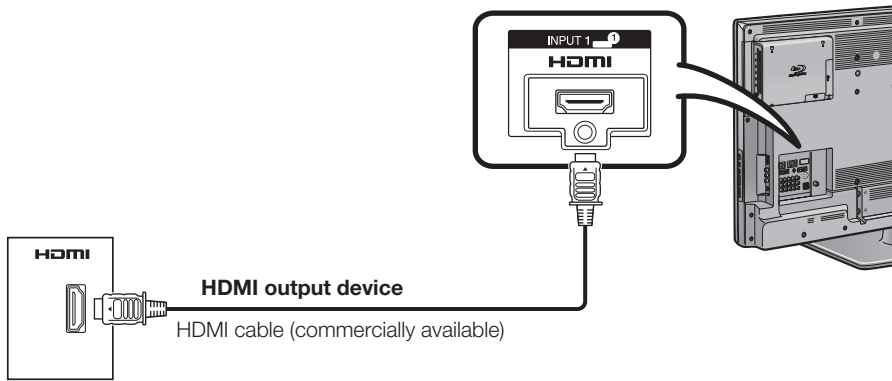
- 1 Press **EPG**.
- 2 Press **B** to display the timer list screen.
- 3 Press **▲/▼** to select a programme you want to change, and then press **ENTER**.
- 4 Press **◀/▶** to select "Cancel" and then press **ENTER**.

Settings when using external devices

Settings when using HDMI output devices

HDMI terminals can carry audio and visual signals to the TV with an HDMI certified cable. When you want to output the audio and picture from an HDMI output device on the TV, select "INPUT1", "INPUT2" or "INPUT3" by switching the input source.

Connecting an HDMI output device

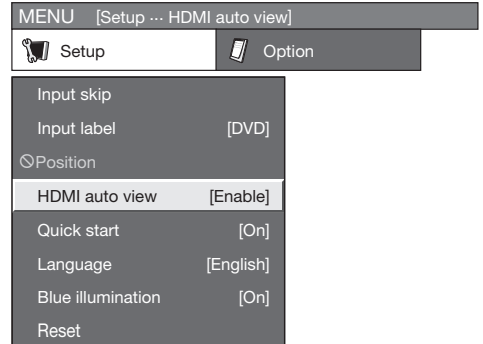


HDMI (High-Definition Multimedia Interface) Auto View

- 1 To watch an HDMI equipment image, select "INPUT1", "INPUT2" or "INPUT3" using **TV/VIDEO** on the remote control unit or on the TV.
- 2 Press **MENU** and the MENU screen displays.
- 3 Press **◀/▶** to select "Setup".

- 4 Press **▲/▼** to select "HDMI auto view", and then press **ENTER**.

- The HDMI auto view can be selected only when "INPUT1", "INPUT2" or "INPUT3" is selected.



- 5 Press **◀/▶** to select the desired item, and then press **ENTER**.

Selected item	Description
Enable/Disable	Set whether or not to use WIDE MODE based on signal recognition, including an HDMI signal.

Settings when using external devices

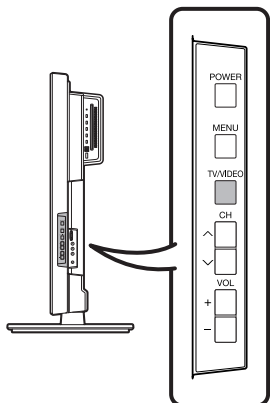
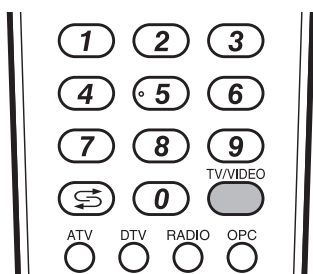
Selecting the input source and signal type

Selecting input source

Can use for selecting the input source.

Using TV/VIDEO on the remote control unit or on the TV.

TV/VIDEO allows you to choose from the available input sources.



1 Press **TV/VIDEO** on the remote control unit or on the TV.

2 Press **TV/VIDEO** on the remote control unit or on the TV to select the input source.

- The image and sound from the selected source are output on the TV.
- You can also select the input source by pressing ▲/▼.

Selecting input signal type

For setting the signal type of external equipment.

1 Press **MENU** and the MENU screen displays.

2 Press ◀▶ to select "Option".

3 Press ▲/▼ to select "Input select", and then press **ENTER**.

4 Press ▲/▼ to select a signal type you want to set, and then press **ENTER**.

Selected item	Description
INPUT 4	Auto, COMPONENT, S-VIDEO, VIDEO
INPUT 6	Auto, COMPONENT, VIDEO

NOTE

- **If no (colour) image displays, try changing the other signal type.**
- Check the operation manual of the external equipment for the signal type.
- When the signal type is set to "Auto", the input terminal where a cable is connected is automatically selected.
- When the signal type is set to "Auto" and multiple video signal cables are connected, the signal type is selected in the following prioritised order:
INPUT 4: COMPONENT → S-VIDEO → VIDEO
INPUT 6: COMPONENT → VIDEO

Selecting the size of the picture for recording

You can use this function to set the appropriate picture size for recording a 16:9 format TV programme broadcast via DTV.

1 Press **MENU** and the MENU screen displays.

2 Press ◀▶ to select "Digital setup".

3 Press ▲/▼ to select "REC picture size", and then press **ENTER**.

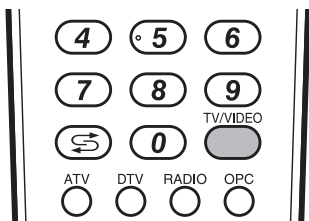
4 Press ◀▶ to select the desired picture size, and then press **ENTER**.

Selected item	Description
16:9 TV	The TV displays the 16:9 format picture with black bands at the top and bottom of the screen.
4:3 TV	The picture gets compressed in the horizontal direction.

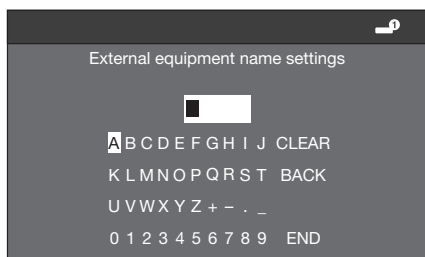
Settings when using external devices

Labelling input sources

You can assign each input source a label as you prefer.

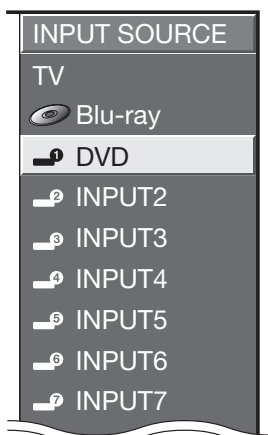


- 1 Press **TV/VIDEO** to select the desired input source.
- 2 Press **MENU** and the MENU screen displays.
- 3 Press **◀▶** to select "Setup".
- 4 Press **▲▼** to select "Input label", and then press **ENTER**.
- 5 Press **▲▼/◀▶** to select each character of the new name for the input source, and press **ENTER**.



(Example)

- 6 Repeat until the name is fully spelt out.
 - The name can be 6 characters or less.
 - When you want to set an input source name of less than 6 characters, select "END", then press **ENTER** to exit from the labelling menu.



(Example)

NOTE

- You cannot change labels if the input source is TV.

Skipping HDMI/RGB input

This setting allows you to skip the HDMI or RGB input on the input source selection operation.

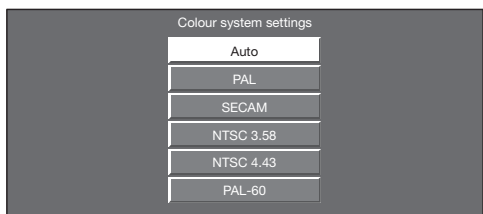
- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀▶** to select "Setup".
- 3 Press **▲▼** to select "Input skip", and then press **ENTER**.
- 4 Press **▲▼** to select the Input (INPUT1 to INPUT3 and INPUT7) you wish to skip, and then press **ENTER**.

INPUT1 (HDMI)	Skip input selection of HDMI
INPUT2 (HDMI)	
INPUT3 (HDMI)	
INPUT7 (RGB)	
<input type="button" value="Yes"/> <input type="button" value="No"/>	
- 5 Press **◀▶** to select "Yes", and then press **ENTER**.
- 6 Press **MENU** to exit.

Colour system settings

You can change the colour system to one that is compatible with the image on the screen.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀▶** to select "Option".
- 3 Press **▲▼** to select "Colour system", and then press **ENTER**.
- 4 Press **▲▼** to select a compatible video signal system of your equipment, and then press **ENTER**.



NOTE

- Factory preset value is "Auto".
- If "Auto" is selected, colour system for each channel is automatically set. If an image does not display clearly, select another colour system (e.g. PAL, NTSC 4.43).
- "Colour system" is selectable only when inputting an S-VIDEO or composite signal.

Settings when using external devices

Setting display colour

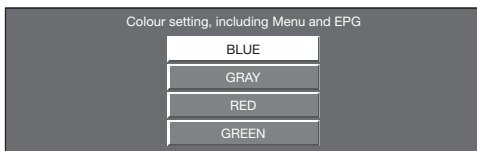
You can change the background colour of the OSD (menu screen), channel display and programme information, etc. to the blue, gray, red or green.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Option”.

3 Press ▲/▼ to select “Setting display colour”, and then press **ENTER**.

4 Press ▲/▼ to select the desired colour, and then press **ENTER**.



Channel selecting effect

This function shows a screen effect when choosing or changing channels.

1 Press **MENU** and the MENU screen displays.

2 Press ◀/▶ to select “Option”.

3 Press ▲/▼ to select “Channel selecting effect”, and then press **ENTER**.

4 Press ◀/▶ to select “On”, and then press **ENTER**.

About Discs

Blu-ray Disc

Blu-ray disc is the ultimate next generation optical media format, offering the following key features:

- Largest capacity (25 GB single layer – 50 GB dual layer) – with over 5 times the amount of content possible with current DVDs, particularly well suited for high definition feature films with extended levels of interactive features
- Pristine picture quality with the capability for full high definition 1920 × 1080p resolution
- Best audio possible with uncompressed surround sound (higher quality than even theater audio)
- Broadest industry support – ensuring more choice for consumers in the marketplace
- Hardware products will be backward compatible with DVDs, allowing continued enjoyment of existing DVD libraries.
- Disc Durability – new breakthroughs in hard coating technologies gives Blu-ray discs the strongest resistance to scratches and finger prints.



- BD/DVD-VIDEO players and discs have region codes, which dictate the regions in which a disc can be played. This product's region code is **B** for BD and **4** for DVD. (Discs marked **ALL** will play in any player.)
- BD/DVD-VIDEO operations and functions may be different from the explanations in this manual and some operations may be prohibited due to disc manufacturer's settings.
- If a menu screen or operating instructions are displayed during playback of a disc, follow the operating procedure displayed.
- The audio component of a DVD-VIDEO recorded at 96 kHz (Linear PCM) will be output as 48 kHz audio during playback.

NOTE

- Playback for some of the discs in the left side column tables may not be possible depending on the disc.
- "Finalize" refers to a recorder processing a recorded disc so that it will play in other DVD players/recorders as well as this TV. Only finalized DVD discs will play back in this TV. (This TV does not have a function to finalize discs.)

Types of Discs that Can Be Used with This TV

- The following discs can be played back in this TV. Do not use an 8 cm (3") to 12 cm (5") adapter.
- Use discs that conform to compatible standards as indicated by the presence of official logos on the disc label. Playback of discs not complying with these standards is not guaranteed. In addition, the image quality or sound quality is not guaranteed even if the discs can be played back.

Disc Type		Recording Format	Contents	Disc Size
BD-VIDEO	Region code B/ALL (A/B/C) 	—	Audio + Video (Movie)	12 cm (5") 8 cm (3")
BD-RE DL BD-R DL		BDMV BDAV		
DVD-VIDEO	Region code 4/ALL 	Video format	Audio + Video (Movie)	12 cm (5") 8 cm (3")
DVD+RW/DVD+R DVD-R DL DVD-RW/DVD-R		Video/VR format (finalized disc only)	Audio + Video (Movie)	
Audio CD*		Audio CD (CD-DA)	Audio	12 cm (5") 8 cm (3")
CD-RW/CD-R		Audio CD (CD-DA)	Audio	

* This TV has been designed on the premise of playing back Audio CDs that comply with CD (Compact Disc) standards. CDs containing a signal for the purpose of protecting copyrights (copy control signal) may not be able to be played back with this TV.

Discs that Cannot Be Used with This TV

■ **The following discs cannot be played back or will not play back properly on this TV. If such a disc is mistakenly played back, speaker damage may occur. Never attempt to play back these discs.**

CDG, Video CD, Photo CD, CD-ROM, CD-TEXT, SVCD, SACD, PD, CDV, CVD, DVD-RAM, DVD-Audio, BD-RE with the cartridge, CD-MP3, CD-WMA

■ **Discs with unusual shapes cannot be played.**

- Discs with unusual shapes (heart-shaped or hexagonal discs, etc.) cannot be used. The use of such discs will cause malfunction.

■ **The following BD-VIDEO discs cannot be played.**

- Discs not displaying “B” or “ALL” for the region code (discs sold outside the authorized marketing area).*
- Discs produced illegally.
- Discs recorded for commercial use.
- * The region code for this product is B.

■ **The following DVD-VIDEO discs cannot be played.**

- Discs not displaying “4” or “ALL” for the region code (discs sold outside the authorized marketing area).*
- Discs produced illegally.
- Discs recorded for commercial use.
- * The region code for this product is 4.

■ **The following BD-RE/R, DVD-RW/R and DVD+RW/R discs cannot be played.**

- Discs on which data has not been recorded cannot be played back.

■ **The following Audio CD discs cannot be played.**

- Discs containing a signal for the purpose of protecting copyrights (copy control signal) may not be played back with this TV.
- This TV has been designed on the premise of playing back Audio CDs that comply with CD (Compact Disc) standards.

■ **The following CD-RW/R discs cannot be played.**

- Discs on which data has not been recorded cannot be played back.
- Discs recorded in a format other than an Audio CD cannot be played back.
- Discs may not be played back depending on their recording status or the status of the disc itself.
- Discs may not be played back depending on their compatibility with this TV.

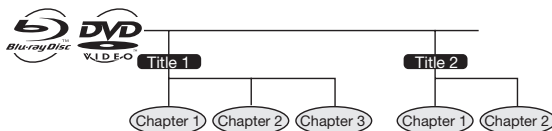
BD-VIDEO

- Enjoy Final Standard Profile functions (see page 59), such as picture-in-picture. The available functions differ depending on the disc. This is a new function of BD-VIDEO that plays the primary video and secondary video simultaneously. For instance, the function is capable of playing the original movie as the primary video while playing video commentary from the film director on a small screen as a secondary video.

Title, Chapter and Track

- Blu-ray discs and DVDs are divided into “Titles” and “Chapters”. If the disc has more than one movie on it, each movie would be a separate “Title”. “Chapters”, on the other hand, are subdivisions of titles. (See Example 1.)
- Audio CDs are divided into “Tracks”. You can think of a “Track” as one tune on an Audio CD. (See Example 2.)

Example 1: Blu-ray disc or DVD

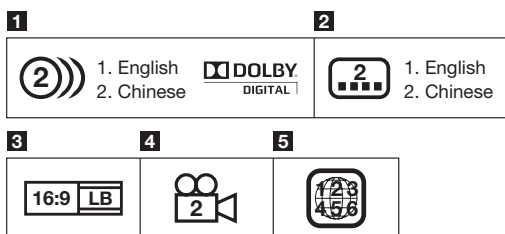


Example 2: Audio CD



Icons Used on DVD-VIDEO Disc Cases

The back of the case of a DVD that is commercially available usually contains various information about the contents of the disc.



1 Audio tracks and audio formats

DVD discs can contain up to 8 separate tracks with a different language on each. The first in the list is the original track.

This section also details the audio format of each soundtrack — Dolby Digital, DTS, MPEG etc.

Dolby Digital

A sound system developed by Dolby Laboratories Inc. that gives movie theater ambience to audio output when the TV is connected to a Dolby Digital processor or amplifier.

DTS

DTS is a digital sound system developed by DTS, Inc. for use in cinemas.

Linear PCM

Linear PCM is a signal recording format used for Audio CDs and on some DVD and Blu-ray discs. The sound on Audio CDs is recorded at 44.1 kHz with 16 bits. (Sound is recorded between 48 kHz with 16 bits and 96 kHz with 24 bits on DVD-VIDEO discs and between 48 kHz with 16 bits and 192 kHz with 24 bits on BD-VIDEO discs.)

2 Subtitle languages

This indicates the kind of subtitles.

3 Screen aspect ratio

Movies are shot in a variety of screen modes.

4 Camera angle

Recorded onto some BD/DVD discs are scenes which have been simultaneously shot from a number of different angles (the same scene is shot from the front, from the left side, from the right side, etc.).

5 Region code

This indicates the region code (playable region code).

The Icons Used in This Operation Manual

- BD-VIDEO**Indicates the functions that can be performed for BD-VIDEO discs.
- BD-RE**Indicates the functions that can be performed for BD-RE discs.
- BD-R**Indicates the functions that can be performed for BD-R discs.
- DVD-VIDEO**Indicates the functions that can be performed for DVD-VIDEO discs.
- DVD-RW**Indicates the functions that can be performed for DVD-RW discs.
- DVD-R**Indicates the functions that can be performed for DVD-R discs.
- AUDIO CD**Indicates the functions that can be performed for Audio CDs.

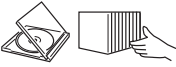



About Discs

Disc Precautions

Be Careful of Scratches and Dust

- BD, DVD and CD discs are sensitive to dust, fingerprints and especially scratches. A scratched disc may not be able to be played back. Handle discs with care and store them in a safe place.

Proper Disc Storage

Place the disc in the center of the disc case and store the case and disc upright.	
Avoid storing discs in locations subject to direct sunlight, close to heating appliances or in locations of high humidity.	
Do not drop discs or subject them to strong vibrations or impacts.	
Avoid storing discs in locations where there are large amounts of dust or moisture.	

Handling Precautions

- If the surface is soiled, wipe gently with a soft, damp (water only) cloth. When wiping discs, always move the cloth from the center hole toward the outer edge.



- Do not use record cleaning sprays, benzene, thinner, static electricity prevention liquids or any other solvent.
- Do not touch the surface.
- Do not stick paper or adhesive labels to the disc.
- If the playing surface of a disc is soiled or scratched, the TV may decide that the disc is incompatible and eject the disc, or it may fail to play the disc correctly. Wipe any dirt off the playing surface with a soft cloth.

Cleaning the Pick Up Lens

- Never use commercially available cleaning discs. The use of these discs can damage the lens.
- Request the nearest service center approved by SHARP to clean the lens.

Warnings about dew formation

- Condensation may form on pick up lens or disc in the following conditions:
 - Immediately after a heater has been turned on.
 - In a steamy or very humid room.
 - When the TV is suddenly moved from a cold environment to a warm one.

When condensation forms:

It becomes difficult for the TV to read the signals on the disc and prevents the TV from operating properly.

To remove condensation:

Take out the disc and leave the TV with the power off until the condensation disappears. Using the TV when there is condensation may cause malfunction.

Copyright

- Audio-visual material may consist of copyrighted works which must not be recorded without the authority of the owner of the copyright. Refer to relevant laws in your country.
- This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

U.S. Patent Nos. 6,836,549; 6,381,747; 7,050,698; 6,516,132; and 5,583,936

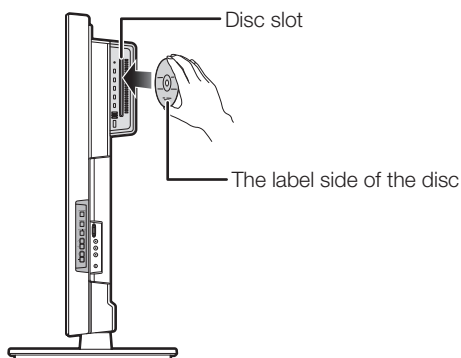
Disc Playback

This section explains playback of commercially available BD-VIDEO and DVD-VIDEO discs (like movies), CDs, and recorded DVD-RW/R discs.

Loading a Disc

Insert the disc into the disc slot.

- The label side of the disc must face towards the front of the TV (towards you).
- When inserting a dual-sided DVD, the side you want to play must face towards the rear of the TV (away from you).



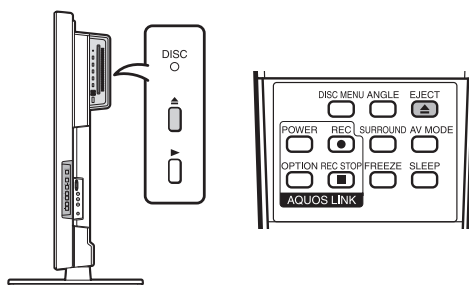
- When the disc is loaded, the DISC indicator lights up.
- Playback may begin automatically, depending on the disc.
- The menu may be displayed first, depending on the disc. Perform playback operation by following the directions on the screen.

NOTE

- In the following cases, the disc will be ejected automatically.
 - When a disc using an incompatible standard or format was inserted.
 - When the disc was inserted facing the wrong way.

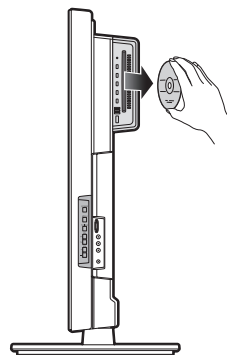
Removing a Disc

- 1 Press on the TV or **EJECT** on the remote control unit.



- The disc is ejected and protrudes partly from the slot.

- 2 Carefully grasp the protruding disc and pull it out.



- After a disc has been ejected, it should be removed from the slot without delay.

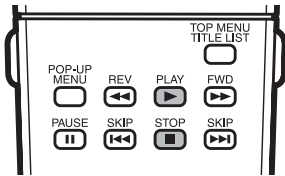
NOTE

- If the TV is jolted or moved while a disc is protruding from the slot, the disc may fall out.
- To reinsert a protruding disc, first remove the disc fully and then load it again.
- During loading, the disc may be unable to be ejected. Wait until the loading is complete and playback starts to eject the disc.

Disc Playback

BD/DVD-VIDEO Playback

BD-VIDEO | DVD-VIDEO | BD-RE | BD-R



- 1 Load a disc.
 - Playback may begin automatically, depending on the disc.

- 2 Press ►.
 - Playback begins from the first title.
 - The menu may be displayed first, depending on the disc. Perform playback operation by following the directions on the screen.

NOTE

- The disc load time may vary depending on the disc.
- During playback of HDMI equipment connected to the TV with AQUOS LINK Control set to "Enable", pressing ► controls the HDMI equipment, not the Disc Drive on the TV.
- Playback on the Disc Drive will stop when you switch the input source or select a TV channel.

To stop playback

Press ■.

Resume playback function

After stopping the disc, press ► to resume playback from the point where the disc has been stopped.

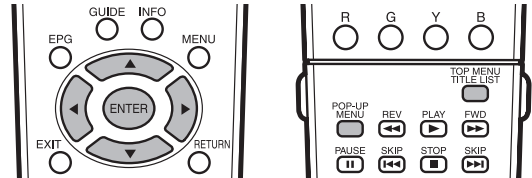
- To play back from the beginning of the disc, press ■ twice and then press ►. (This may not work depending on the type of disc. In this case, eject the disc or enter standby.)

NOTE

- Resume playback may not function depending on the disc.

BD/DVD Menus

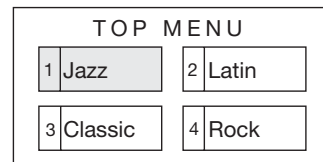
- This section explains how to play back a BD/DVD-VIDEO disc with a top menu, disc menu or pop-up menu.
- The titles listed in the top menu and a disc guide (for options like subtitles and audio languages) are given in the disc menu.



Start Playback by Selecting a Title from the Top Menu

BD-VIDEO | DVD-VIDEO

- 1 Press **TOP MENU/TITLE LIST**.
 - The top menu screen is displayed.



- 2 Press ▲/▼/◀/▶ to select the title, and then press **ENTER**.
 - The selected title is played back.

NOTE

- The procedure explained on this page is the basic operation procedure. Procedures vary depending on the BD/DVD-VIDEO disc, so you may need to follow the instructions in the BD/DVD-VIDEO disc manual or the instructions displayed on the screen.
- A top menu is not displayed for a DVD-RW/R (Video format) if it has not been finalized.

Top menu

- With some BD/DVD discs, the top menu may be referred to as the "Title Menu". Use **TOP MENU/TITLE LIST** on the remote control when the instructions refer to "Title Menu".
- If no top menu is available, the **TOP MENU/TITLE LIST** button will have no effect.

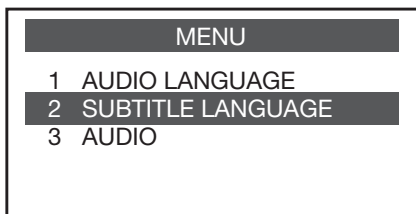
Disc Playback

Using the Disc Menu

DVD-VIDEO

Example: Select "SUBTITLE LANGUAGE".

- 1 Press **TOP MENU**.
 - The disc menu screen is displayed.
- 2 Press **▲/▼** to select "SUBTITLE LANGUAGE", and then press **ENTER**.
 - The screen for selecting the subtitle language is displayed.

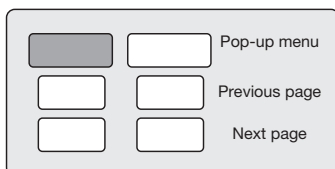


- 3 Press **▲/▼** to select the subtitle language, and then press **ENTER**.
- 4 Press **TOP MENU** to exit.

Using the Pop-up Menu

BD-VIDEO

- 1 Press **POP-UP MENU** during playback.
 - The pop-up menu screen is displayed.
 - The menu contents displayed vary depending on the disc. For details on how to see and operate the pop-up menu, refer to the manual for the disc.



- 2 Press **▲/▼/◀/▶** to select the desired item, and then press **ENTER**.
- 3 Press **POP-UP MENU** to exit.
 - The pop-up menu will automatically disappear for some discs.

BONUSVIEW or BD-LIVE

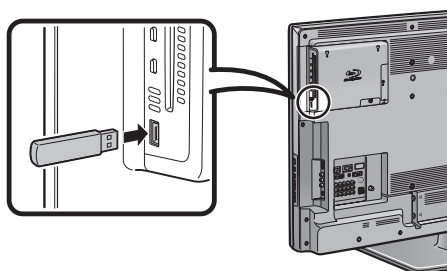
Enjoying BONUSVIEW or BD-LIVE

BD-VIDEO

This TV is compatible with additional functions of BD-Video, BONUSVIEW (BD-ROM Profile 1 Version 1.1) and BD-LIVE.

For BD-Video discs compatible with BONUSVIEW, the functions of Picture in Picture and Virtual Package are available. For BD-LIVE compatible discs, you can enjoy a variety of functions via the internet in addition to the BONUSVIEW functions.

Virtual Package/BD-LIVE data is saved in Local Storage (USB memory device connected to this TV). To enjoy these functions, connect a USB memory device (2GB or greater) supporting USB 2.0 High Speed (480Mbit/s) to the BD STORAGE/SERVICE terminal (page 8) on the back of this TV.



- First, insert the USB memory device into the BD STORAGE/SERVICE terminal on the Disc Drive of this TV, and then insert the disc.
- If there is insufficient storage space, the data will not be copied/downloaded. Delete unneeded data or use a new USB memory device.
- If a USB memory device containing other data (previously recorded) is used, the video and audio may not play back properly.
- If the USB memory device is disconnected from this TV during playback of Virtual Package/BD-LIVE data, playback of the disc will stop.
- Some time may be required for the data to load (read/write).
- Refer to "USB Memory Management" on page 70 for erasing the Virtual Package data and the BD-LIVE data in the USB memory device.

NOTE

- SHARP cannot guarantee that all brands' USB memory devices will operate with this TV.
- Only USB memory devices formatted with FAT 32/16 are compatible.
- Do not use a USB extension cable when connecting a USB memory device to the BD STORAGE/SERVICE terminal of the TV.
 - Using a USB extension cable may prevent the TV from performing correctly.

Disc Playback

Use of Picture in Picture Function (Secondary Audio/Video Playback)

BD-VIDEO

BD-VIDEO that includes secondary audio and video compatible with Picture in Picture can be played back with secondary audio and video simultaneously as a small video in the corner.



Primary audio/video

Secondary audio/video

- The secondary audio and video for Picture in Picture may automatically play back and be removed depending on the content. Also, playable areas may be restricted.

NOTE

- You can switch on/off the Secondary Audio function. (See page 65 for details.)

Virtual Package

BD-VIDEO

Some BD-VIDEO discs are compatible with a function where data is copied to local storage (USB memory device, etc.) and played back along with the primary video as secondary video, secondary audio, subtitles, etc.

This function is called Virtual Package.

Virtual Package data is automatically copied to the local storage prior to playback. The playback methods vary depending on the disc.

- First, insert the USB memory device into the BD STORAGE/SERVICE terminal on the Disc Drive of this TV, and then insert the disc.

A variety of functions can be enjoyed during playback of BD-VIDEO compatible with Virtual Package, which features data copied to the BD Local Storage separate from the Blu-ray disc.

- See the disc manual for required storage space and instructions on copying/playback.

NOTE

- If there is insufficient storage space, the data will not be copied. Delete unneeded data or use a new USB memory device.
- If a USB memory device containing other data (previously recorded) is used, the video and audio may not play back properly.
- If the USB memory device is disconnected from this TV during playback of Virtual Package, playback of the disc will stop.
- Some time may be required for the data to load (read/write).

See page 70 for deletion of the Virtual Package data copied to the USB memory device.

BD-LIVE

In this TV, a variety of contents with interactive functions are available through BD-LIVE compatible Blu-ray discs by connecting to the internet. You can enjoy the download of bonus features such as latest movie trailers to the USB memory device, communication compatible BD-J interactive games, etc.

- First, insert the USB memory device into the BD STORAGE/SERVICE terminal on the Disc Drive of this TV, and then insert the disc.
- The available functions differ depending on the disc.

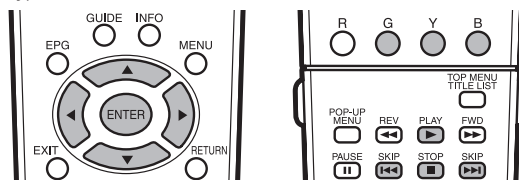
NOTE

- Regarding playback method of BD-LIVE contents, etc., perform the operations in accordance with the instructions in the BD disc manual.
- To enjoy BD-LIVE functions, perform the broadband internet connection (page 16) and communication settings (pages 66–67).
- Refer to page 65 regarding the setup to restrict access to BD-LIVE contents.

DVD-R/-RW/BD-RE/-R Playback

DVD-R DVD-RW BD-RE BD-R

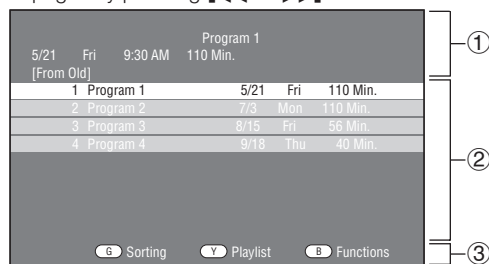
You can play back a recorded disc (finalized DVD disc only).



1

Load a recorded disc.

- The Title List screen is displayed.
- When more than seven titles are displayed, switch pages by pressing ◀◀ or ▶▶.



- Information of selected title
- Title Name/Recording Date/Recording Duration
- Caption for Colour Button

2

Press ▲/▼ to select the title, and then press **ENTER**.

- Playback of the selected title will begin. You can play back by pressing ▶ instead of pressing **ENTER**.

3

Press ■ to stop playback.

NOTE

- "Finalize" refers to a recorder processing a recorded disc so that it will play in other DVD players/recorders as well as this TV. Only finalized DVD discs will play back in this TV. (This TV does not have a function to finalize discs.)

Disc Playback

Playback by Selecting a Playlist

- 1 Load a recorded disc.
 - 2 Press **TOP MENU/TITLE LIST**.
 - The Title List screen is displayed.
 - 3 Press **Y** (Yellow) while the Title List screen is displayed.
 - The Playlist screen is displayed.
- | Program 1 | | | | |
|-----------|-----------|---------|----------|----------|
| 5/21 | Fri | 9:30 AM | 110 Min. | |
| 1 | Program 1 | 5/21 | Fri | 110 Min. |
| 2 | Program 2 | 7/3 | Mon | 110 Min. |
- 4 Press **▲/▼** to select the title, and then press **ENTER**.
 - Playback of the selected title will begin.
 - 5 Press **■** to stop playback.

Sorting the Titles

Each time you press **G** (Green), the Title List display changes between displaying the newest titles first and the oldest titles first.

Playing Back the Title You Stopped While Being Played

- 1 Press **B** (Blue) while the Title List screen is displayed, and then press **ENTER**.

From Beginning
From Continued
- 2 Press **◀/▶** to select the type of playback, and then press **ENTER**.
 - Playback of the title will begin.

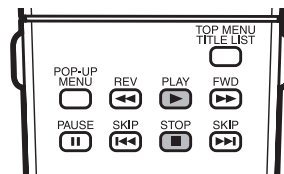
NOTE

- “Finalize” refers to a recorder processing a recorded disc so that it will play in other DVD players/recorders as well as this TV. Only finalized DVD discs will play back in this TV. (This TV does not have a function to finalize discs.)

Audio CD Playback

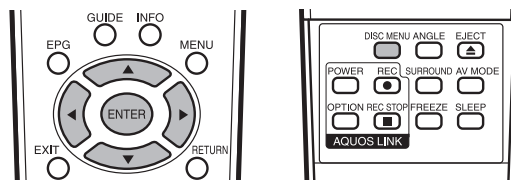
AUDIO CD

Playback from the Beginning



- 1 Load an audio CD.
 - Playback may begin automatically, depending on the disc.
 - Press **▶**.
 - Playback begins from the first track.
- 2 Press **■** to stop playback.

Selecting a Track for Playback



- 1 Load an audio CD, and then press **DISC MENU**.
 - The DISC MENU control screen is displayed.
- 2 Press **▲/▼/◀/▶** to select “T”, and then press **ENTER**.
- 3 Press **▲/▼** to select the track number, and then press **ENTER**.
 - You can also use **0-9** on the remote control unit to specify the track number.
 - Playback starts from the selected track.

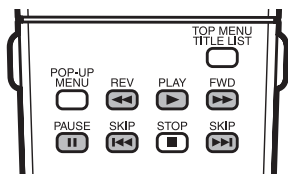
Disc Playback

Playback Functions

BD-VIDEO | BD-R | BD-RE

DVD-VIDEO | DVD-R | DVD-RW

AUDIO CD



NOTE

- Some operations in the following playback functions cannot be performed depending on the specifications of the disc.

Fast Forward/Reverse (Search)

Fast Forward/Reverse functions when **▶▶** or **◀◀** is pressed during playback.

Example: When ▶▶ is pressed

- The search speed will change each time you press the button.

When playing back a DVD

- You cannot fast forward or fast reverse from one title and continue to another title (except when playing audio CDs).

Skipping to the Next or the Start of the Current Chapter (Track)

Skipping (to the beginning of a chapter or track) functions when **◀◀** or **▶▶** is pressed during playback.

Pause/Frame Advance Playback

Pause functions when **||** is pressed during playback. (If you are playing back an audio CD, the CD will also pause.)

Frame Advance Playback functions when **▶▶||** is pressed during Pause.

- Frame Advance Playback may not function properly with discs other than DVD-RW (VR format).

NOTE

- Frame Advance/Reverse Playback can be performed for DVD discs by pressing **◀◀||** or **▶▶||** during Pause.
- Some BD/DVD-VIDEO discs are not compatible with Pause/Frame Advance Playback.

Slow Playback

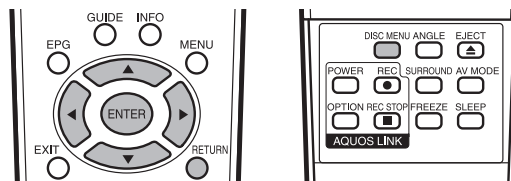
Slow Playback functions when **◀◀** or **▶▶** is pressed more than 2 seconds during pause.

- Press **▶** to return to normal playback.

NOTE

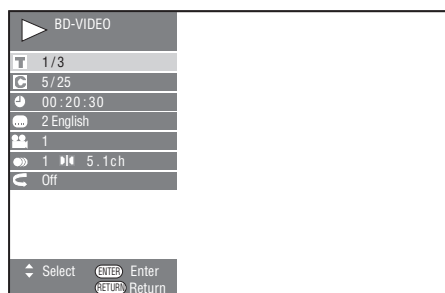
- This function does not work for audio CDs.
- Reverse Slow Playback cannot be performed for BD-VIDEO.

Repeat Playback of a Title or Chapter (Repeat Playback)



- 1 Play back the title or chapter you want to repeat.

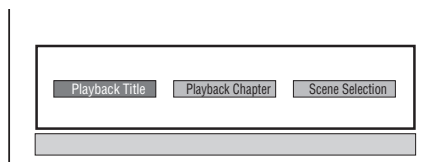
- 2 Press **DISC MENU**.
 - The DISC MENU control screen is displayed.



- 3 Press **▲/▼** to select "⏮", and then press **ENTER**.

- 4 Press **▲/▼** to select "On", and then press **ENTER**.

- 5 Press **◀▶** to select the type of Repeat Playback.
 - Playback Title: Repeats the title currently being played back.
 - Playback Chapter: Repeats the chapter currently being played back.
 - Scene Selection: Repeats the specified scene of title or chapter.



- Press **RETURN** to cancel without setting the type of Repeat Playback.
- For Audio CD, you can select "Playing Disc", "Playing Track" and "Specify The Part" as Repeat Playback options.

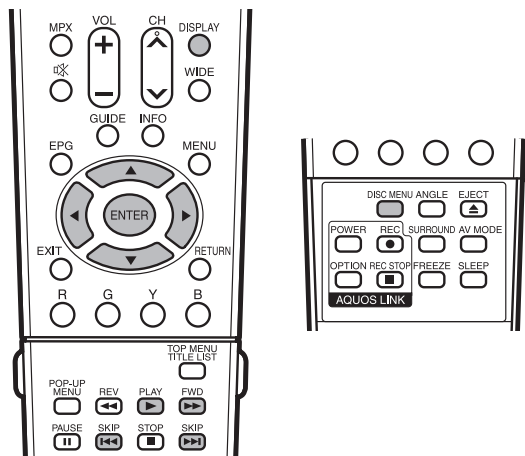
- 6 Press **ENTER**.

Disc Playback

Partial Repeat Playback (Repeat Playback of a Specified Part)

DVD-VIDEO DVD-R DVD-RW

AUDIO CD



NOTE

- Some operations in the following playback function cannot be performed depending on the specifications of the disc.

1 Press **DISC MENU** during playback.

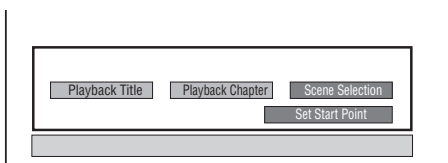
- The DISC MENU control screen is displayed.

2 Press $\blacktriangle/\blacktriangledown$ to select “**⏮**”, and then press **ENTER**.

3 Press $\blacktriangle/\blacktriangledown$ to select “On”, and then press **ENTER**.

4 Press $\blacktriangleleft/\blacktriangleright$ to select “Scene Selection”, and then press **ENTER**.

- “Set Start Point” displays.



5 Press **ENTER** at the scene where you want to set the start point.

- “Set Start Point” displays.

6 Press **ENTER** at the scene where you want to set the end point.

- You can press $\blacktriangleright\blacktriangleright$ to fast forward to the scene where you want to set the end point. When you reach the desired scene, simply press \blacktriangleright and then **ENTER** to set the end point.

To cancel Repeat Playback

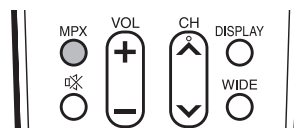
1 Press $\blacktriangle/\blacktriangledown$ to select “**⏮**” while the DISC MENU control screen is displayed.

2 Press $\blacktriangleleft/\blacktriangleright$ to select “Off”, and then press **ENTER**.

NOTE

- Press $\blacktriangleright\blacktriangleright$, the Repeat Playback is cancelled and the next chapter is played back.
- Press $\blacktriangleleft\blacktriangleleft$ once, the Repeat Playback is cancelled and the TV returns to the start of current chapter (track).
- If you press $\blacktriangleleft\blacktriangleleft$ again (within about 5 seconds), the TV will skip to the beginning of the previous chapter (track).
- For Partial Repeat Playback, set the start and end points within the same title.
- Repeat Playback may be forbidden depending on the disc.
- Partial Repeat Playback may not work in multi-angle scenes.
- If you press **DISPLAY**, you can confirm the Repeat Playback status.

Switching the Audio



You can change the audio track using **MPX**.

- The displayed information varies depending on the disc.

BD-VIDEO DVD-VIDEO

If multiple audio is recorded, you can switch the audio each time you press **MPX**.

The newly selected audio track will be displayed.

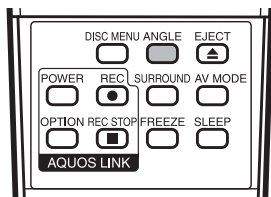
DVD-RW DVD-R

When a recorded broadcast with stereo or monaural audio is played back:

“Stereo” is displayed. (Audio cannot be switched.)

Disc Playback

Switching the Angle



If multiple angles are recorded, you can switch between them.

Press **ANGLE** during playback.

- The display indicates the angle number currently being played back. Each time you press **ANGLE**, the angle switches.
- “-” is displayed if a disc is recorded with only one angle.



To return to the previous angle, press **ANGLE** to cycle through the angles until you return to the original angle.

Displaying the Angle Mark

You can change settings so that Angle Mark appears in the right bottom part of the screen when multiple angles are recorded. (The Angle Mark is only displayed for DVD-VIDEO.) The settings can be changed in “Blu-ray disc Setup” - “Playback Setting” - “Angle Mark Display”. (See page 65.)

NOTE

- Settings for audio, subtitles and angle can be changed also in DISC MENU control screen. (See this page.)
- The operations of subtitles, angle and audio differ according to each disc. You may need to refer to the operation manual of the disc.
- The following operations will not work when playing back an audio CD:
Slow Playback, Frame Advance

Display of functions

- The display for subtitles, angle or audio automatically disappears after 5 seconds.

Switching between functions

- You can switch the subtitles, angle and audio at the DISC MENU control screen. (See this page.)
- The operation for each function varies depending on the disc. See the manual for the disc.

Fast Forward/Reverse

- You cannot perform Fast Forward/Fast Reverse between titles. At the end or beginning of the title, Fast Forward/Fast Reverse will be cancelled and normal playback will automatically resume.
- Subtitles are not played back with BD/DVD-VIDEO discs during Fast Forward and Fast Reverse.

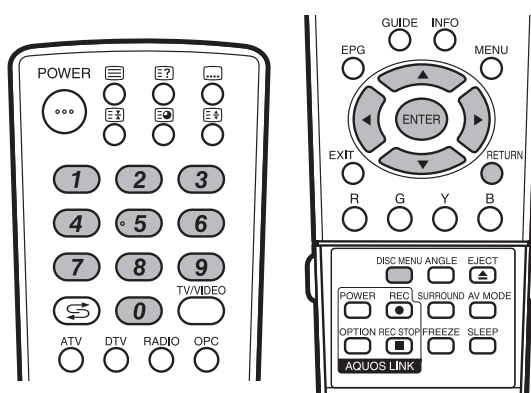
Slow Playback

- You cannot perform Slow Playback between titles. At the end of the title, Slow Playback will be cancelled and normal playback will automatically resume.

Repeat Playback

- Repeat Playback may be forbidden depending on the disc.
- Partial Repeat Playback may not work in multi-angle scenes.
- For Partial Repeat Playback, set the start and end points within the same title.

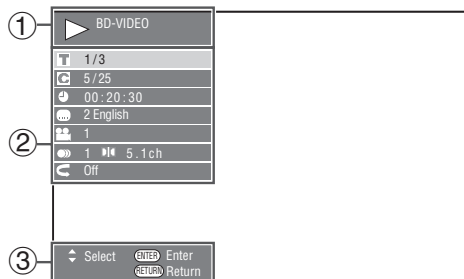
Settings During Playback



DISC MENU Control

This allows you to adjust various settings at once, like subtitles, angle settings and the title selection for Direct Playback. You can adjust the video and audio to suit your preferences. The operations are the same for BD and DVD.

DISC MENU control screen



① Playback status display

Shows the operation status and the disc type.

② Setting items

Selects a title or chapter for playback, or performs video/audio settings.

- Title Number (Direct Title Skip)
- Chapter Number (Direct Chapter Skip)
- Playback Elapsed Time (Direct Time Skip)
- Subtitle Language
- Angle Number
- Audio
- Repeat

③ Operation guide display

Provides help on remote control button operations.

Disc Playback

DISC MENU Operation Procedure

- 1 Press **DISC MENU** during playback.
 - The DISC MENU control screen is displayed.
- 2 Press **▲/▼** to select the desired setting, and then press **ENTER**.
 - For a description of each setting, see “DISC MENU Which Can Be Set”.
- 3 Press **▲/▼/◀/▶** to set, and then press **ENTER**.
 - Operations vary depending on the setting. Follow the operation instructions on the screen.
- 4 Press **RETURN** or **DISC MENU** to close the DISC MENU control screen.

NOTE

- If “–” is displayed for an option like title number or subtitles, the disc has no titles or subtitles which can be selected.
- The displayed items vary depending on the disc.
- If you access the DISC MENU control screen during playback of a BD/DVD-VIDEO, it may be impossible to operate the BD/DVD-VIDEO playback. In cases like this, close the DISC MENU control screen.

DISC MENU Which Can Be Set

Title Number (Direct Title Skip)

- Shows the title number being played back. You can skip to the start of the title.
- To skip to the start of a selected title, press **0 – 9** to enter the title number when this option is highlighted.

Chapter Number (Direct Chapter Skip)

- Shows the chapter number being played back. You can skip to the start of the chapter.
- To skip to the start of a selected chapter, press **0 – 9** to enter the chapter number when this option is highlighted.

Playback Elapsed Time (Direct Time Skip)

- Shows the elapsed time from the beginning of the disc to the present. This lets you skip to a specific time.
- Press **◀/▶** to select the Hour, Minute or Second, and then press **▲/▼** or **0 – 9** to set the time. Press **ENTER** to start playback at the set time.

Subtitle Language

- Shows the currently selected subtitle language. If subtitles are provided in other languages, you can switch to your preferred language.

Angle Number

- Shows the currently selected angle number. If the video is recorded with multiple angles, you can switch the angle.

Audio

- Shows the currently selected type of audio. You can select the desired type of audio.

Repeat

- The current Title (or Chapter) or partial segments can be repeatedly played back.

NOTE

- These functions may not work with all discs.

Blu-ray disc Setup

Audio Video Settings

■ Play Format

Set the playback setting for content recorded in 24Hz.

Auto: The content is played back in 24Hz.

Off: The content is played back in 60Hz.

■ Secondary Audio

This toggles the clicking sound on the menu and audio with secondary video in picture in picture mode for BD-VIDEO.

On: BD-VIDEO that includes secondary audio compatible with Picture in Picture can be played back with secondary audio.

Off: Secondary audio does not output.

NOTE

- “On” is the factory preset value.
- Select “Off” when enjoying the high quality sounds of BD-VIDEO.
- You cannot change the Secondary Audio setting during playback.

■ Digital Audio Out

You can set Digital Audio Out when connecting to SURROUND equipment.

Bitstream: Select this when connecting to SURROUND equipment with a built-in decoder for DOLBY DIGITAL, etc. Setting to Bitstream will output each audio signal by Bitstream.

PCM: Select this when connecting to 2-channel stereo audio equipment. Setting to PCM will output by converting each audio signal into PCM 2-channel audio signal.

NOTE

- See page 69 for information on output of next generation audio formats.

■ Dynamic Range Control

This lets you adjust the range between the loudest and softest sounds (dynamic range) for playback at average volume. Use this when it is hard to hear dialog.

Normal: The same audio output range is played as the original recorded audio output range.

Shift*: When Dolby Digital audio is played back, the dynamic range of the audio is adjusted so that the dialog portion can be heard easily. (If the audio sounds abnormal, set to “Normal”.)

- * Lower the audio volume before setting. If you do not do so, the speakers may emit a loud sound or excessive output may be applied to the speakers.

Playback Setting

■ Parental Control

This lets you set the Parental Control depending on the disc content. The available Parental Control Levels are shown below.

The 4-digit PIN code number needs to be entered before the Parental Control Levels and the Country Code are set. The Parental Control Levels and the Country Code cannot be set if a PIN code has not been created or the PIN code is not entered.

For DVD-VIDEO:

8 and Off: All DVD-VIDEO can be played.

1-7: Prohibits play of DVD-VIDEO with corresponding ratings recorded on them.

For BD-ROM:

No Limit: All BD-VIDEO can be played.

0 – 99 year(s): Prohibits play of BD-VIDEO with corresponding ratings recorded on them.

Country Code:

Set the Country Code. Refer to the Country Code List (see page 69) because the ratings differ according to the country.

■ Disc Language (Disc Priority Language)

This lets you select the language for subtitles, audio and menus displayed on the screen.

Subtitle: Refer to the Language List. (See page 69.)

Audio: Refer to the Language List. (See page 69.)

Menu: Refer to the Language List and the Language Code List. (See page 69.)

■ Angle Mark Display

This lets you turn the Angle Mark Display on or off when DVD-VIDEO recorded with multiple angles is played back.

Yes: The Angle Mark is displayed in the lower right screen.

No: The Angle Mark is not displayed.

■ PIN Code Setting

This sets the PIN code for setting or changing the Parental Control Level.

Yes: Enter the 4-digit number.

No: Select this when not setting the PIN code.

■ BD Internet Access

This allows you to set access restriction to BD-LIVE contents.

Item

Permit: Allow all BD-LIVE discs.

Limit: Allow only discs with owner certification.

Prohibit: Prohibit all BD-LIVE discs.

NOTE

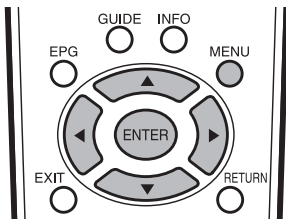
- The available functions differ depending on the disc.
- Regarding playback method of BD-LIVE contents, etc., perform the operations in accordance with the instructions in the BD disc manual.
- To enjoy BD-LIVE functions, perform the broadband internet connection (page 16) and communication settings (pages 66–67).

Communication Setup

This allows you to perform and/or change the communication setting. This setting is required to use BD-LIVE functions that connect to the internet.

NOTE

- Make sure that the ETHERNET cable is connected to this TV. (See page 16.)
- For manually performing the setting, the following information of the connected router or modem is required. Confirm the information prior to the setting.
 - IP address, netmask, gateway, DNS address
- Besides, if specifying a proxy server, the following information specified from your internet service provider is also required. Confirm the information prior to the setting.
 - IP address and port number of the proxy server



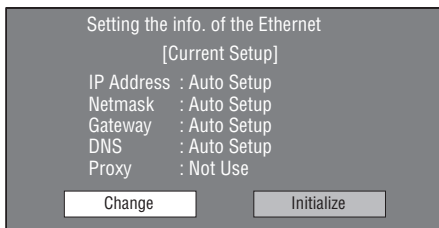
1 Press **MENU** to display the MENU screen, and then press **◀▶** to select “Option”.

2 Press **▲▼** to select “Blu-ray disc Setup”, and then press **ENTER**.

3 Press **▲▼** to select “Communication Setup”, and then press **ENTER**.

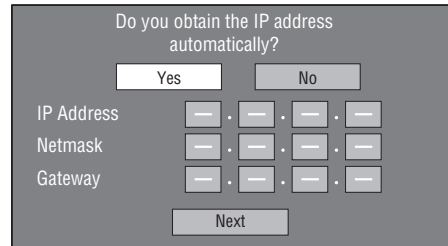
4 Press **ENTER**.

5 Press **◀▶** to select “Change”, then press **ENTER**.



- For initializing the current setting, select “Initialize”, then press **ENTER**.

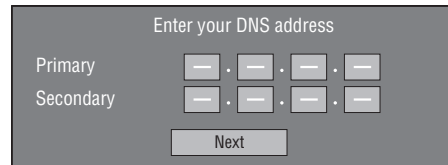
6 For setting the IP address, press **◀▶** to select “Yes” or “No”, then press **ENTER**.



- If selecting “Yes”: The IP address is automatically obtained. (Go to the step 10.)
- If selecting “No”: The IP address, netmask and gateway are manually entered using the screen for inputting characters. (See page 68.) Regarding each of the setup values, confirm the specifications of your broadband router.

7 Select “Next”, then press **ENTER**.

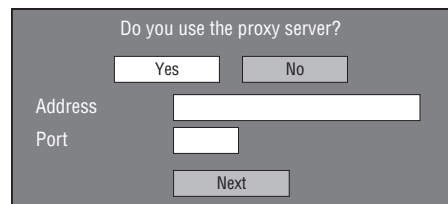
8 Enter your DNS address.



- The primary and secondary DNS addresses are entered using the screen for inputting characters. (See page 68.) Regarding each of the setup values, confirm the specifications of your broadband router.

9 Select “Next”, then press **ENTER**.

10 For setting the proxy server, press **◀▶** to select “Yes” or “No”, then press **ENTER**.



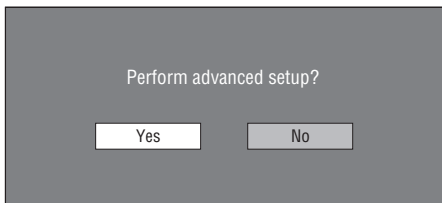
- If selecting “Yes”: The IP address or proxy server name and port number for the proxy server specified from your internet service provider are entered using the screen for inputting characters. (See page 68.)
- If selecting “No”: Go to the next step.

11 Select “Next”, then press **ENTER**.

Communication Setup (continued)

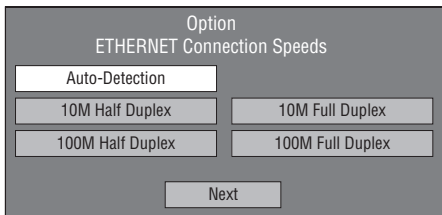
12 For the advanced setting (the setting of the Ethernet connection speeds), press **◀/▶** to select “Yes” or “No”, then press **ENTER**.

- Normally select “No”, then press **ENTER**. (Go to the step 14.)



- The Ethernet connection speeds can be set when you select “Yes”, then press **ENTER**.

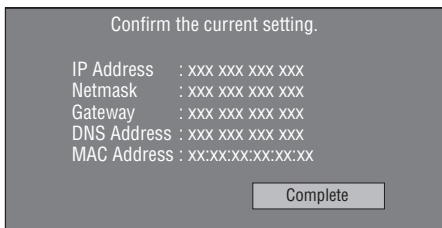
13 For the Option Ethernet connection speeds, press **◀/▶** to select the connection speed, then press **ENTER**.



- As automatic detection is made (factory preset mode), this setting is not normally necessary. If a situation occurs in which the Ethernet connection fails, etc., change the setting and confirm if the Ethernet connection successfully works. When the connection speed is set, select “Next”, then press **ENTER**.

14 For testing the connection to the internet, after confirming the settings, press **◀/▶** to select “Test”, then press **ENTER**.

- “Test” is available only when setting to obtain the IP address automatically. “Test” cannot be selected if the IP address has not been obtained automatically.



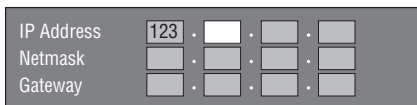
- As a result of the test, if the internet connection fails, enter the setup values manually.

15 Press **◀/▶** to select “Complete”, then press **ENTER**.

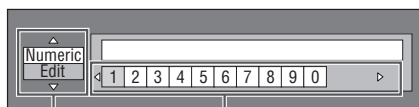
The operation procedure for inputting characters manually

NOTE

- Numeric characters such as IP address can be entered on the input screen either by selecting each of the characters in the "Numeric" mode or using the **Number** buttons on the remote control.



1 Press **ENTER** at the boxes in which characters are to be entered, and the input screen will appear.



Selected by pressing ▲/▼ Selected by pressing ◀/▶

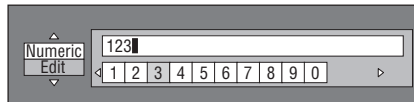
2 Press ▲/▼ to select the desired input mode.

- When inputting the address of the proxy server; "1ABC" (Alphabet/numeric character)/"Sign"/"Edit"
- When inputting other values (IP address, etc.); "Numeric"/"Edit"

3 Press ◀/▶ to select a number/character, then press **ENTER**.

4 Repeat the step 3 to display all of the desired characters/numbers in the input field.

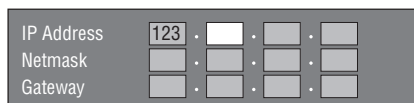
Example: The screen for inputting numeric characters



NOTE

- Press **RETURN** (Del.Char.) to delete a number/character you have input.
- To change a number/character you have input, press **G** (Green) (Left) or **Y** (Yellow) (Right) to select the number/character you want to change, and press **RETURN** (Del.Char.). Then, press ◀/▶ to select a new number/character you want to input, and press **ENTER**.

5 Press **B** (Blue) (Complete) to fix the numbers which have been input.



6 Repeat step 1 to 5 to finish inputting all the required characters.

Input character list

1ABC (Alphabet/numeric character)	Num.	ABC	DEF	GHI	JKL	MNO	PQRS	TUV	WXYZ	Spc.
	Num.	1 2 3 4 5 6 7 8 9 0	ABC	A B C a b c	DEF	D E F d e f				
	GHI	G H I g h i	JKL	J K L j k l	MNO	M N O m n o				
	PQRS	P Q R S p q r s	TUV	T U V t u v	WXYZ	W X Y Z w x y z				
	Spc.	(space)								
Numeric		1 2 3 4 5 6 7 8 9 0								
Sign	@ . , : ; _ - \ \$ % ! ? & # + * = / ~ " ' ^ ` () < > [] { } Spc.									
	@ . , :	@ . , :	; _ - \	; _ - \	\$ % ! ?	\$ % ! ?				
	& # + *	& # + *	= / ~	= / ~	" ' ^ `	" ' ^ `				
	() < >	() < >	[] { }	[] { }	Spc.	(space)				
Edit	Cancel	Left	Right	Complete	Del.Char.					
	* The same operation as the coloured buttons and RETURN can be performed by selecting each of the items and pressing ENTER . "Del.Char." stands for deleting characters.									

Blu-ray disc Setup

Country Code List

USA / CANADA / JAPAN / GERMANY / FRANCE / UK / ITALY / SPAIN / SWISS / SWEDEN / HOLLAND / NORWAY / DENMARK / FINLAND / BELGIUM / HONG KONG / SINGAPORE / THAILAND / MALAYSIA / INDONESIA / TAIWAN / PHILIPPINE / AUSTRALIA / RUSSIA / CHINA

Language List

English / Français / Deutsch / Italiano / Español / Japanese / Svenska / Nederlands

Language Code List

AA Afar / **AB** Abkhazian / **AF** Afrikaans / **AM** Ameharic / **AR** Arabic / **AS** Assamese / **AY** Aymara / **AZ** Azerbaijani / **BA** Bashkir / **BE** Byelorussian / **BG** Bulgarian / **BH** Bihari / **BI** Bislama / **BN** Bengali, Bangla / **BO** Tibetan / **BR** Breton / **CA** Catalan / **CO** Corsican / **CS** Czech / **CY** Welsh / **DA** Danish / **DE** German / **DZ** Bhutani / **EL** Greek / **EN** English / **EO** Esperanto / **ES** Spanish / **ET** Estonian / **EU** Basque / **FA** Persian / **FI** Finnish / **FJ** Fiji / **FO** Faroese / **FR** French / **FY** Frisian / **GA** Irish / **GD** Scots Gaelic / **GL** Galician / **GN** Guarani / **GU** Gujarati / **HA** Hausa / **HI** Hindi / **HR** Croatian / **HU** Hungarian / **HY** Armenian / **IA** Interlingua / **IE** Interlingue / **IK** Inupiak / **IN** Indonesian / **IS** Icelandic / **IT** Italian / **IW** Hebrew / **JA** Japanese / **JI** Yiddish / **JW** Javanese / **KA** Georgian / **KK** Kazakh / **KL** Greenlandic / **KM** Cambodian / **KN** Kannada / **KO** Korean / **KS** Kashmiri / **KU** Kurdish / **KY** Kirghiz / **LA** Latin / **LN** Lingala / **LO** Laothian / **LT** Lithuanian / **LV** Latvian, Lettish / **MG** Malagasy / **MI** Maori / **MK** Macedonian / **ML** Malayalam / **MN** Mongolian / **MO** Moldavian / **MR** Marathi / **MS** Malay / **MT** Maltese / **MY** Burmese / **NA** Nauru / **NE** Nepali / **NL** Dutch / **NO** Norwegian / **OC** Occitan / **OM** Afan (Oromo) / **OR** Oriya / **PA** Panjabi / **PL** Polish / **PS** Pashto, Pushto / **PT** Portuguese / **QU** Quechua / **RM** Rhaeto-Romance / **RN** Kirundi / **RO** Romanian / **RU** Russian / **RW** Kinyarwanda / **SA** Sanskrit / **SD** Sindhi / **SG** Sangho / **SH** Serbo-Croatian / **SI** Singhalese / **SK** Slovak / **SL** Slovenian / **SM** Samoan / **SN** Shona / **SO** Somali / **SQ** Albanian / **SR** Serbian / **SS** Siswat / **ST** Sesotho / **SU** Sundanese / **SV** Swedish / **SW** Swahili / **TA** Tamil / **TE** Telugu / **TG** Tajik / **TH** Thai / **TI** Tigrinya / **TK** Turkmen / **TL** Tagalog / **TN** Setswana / **TO** Tonga / **TR** Turkish / **TS** Tsonga / **TT** Tatar / **TW** Twi / **UK** Ukrainian / **UR** Urdu / **UZ** Uzbek / **VI** Vietnamese / **VO** Volapuk / **WO** Wolof / **XH** Xhosa / **YO** Yoruba / **ZH** Chinese / **ZU** Zulu

About Output of Next Generation Audio Formats

Next generation audio formats	Maximum number of channels	DIGITAL OUT	
		PCM	Bitstream
Dolby TrueHD	7.1ch (48KHz/96KHz)	2ch ^{*2}	5.1ch ^{*1/*3}
	5.1ch (192KHz)	2ch ^{*2}	5.1ch ^{*1/*3}
Dolby Digital PLUS	7.1ch (48KHz)	2ch ^{*2}	5.1ch ^{*1/*3}
DTS-HD Master Audio	7.1ch (48KHz/96KHz)	2ch ^{*2}	5.1ch ^{*1/*3}
	5.1ch (192KHz)	2ch ^{*2}	5.1ch ^{*1/*3}
DTS-HD High Resolution Audio	7.1ch (48KHz/96KHz)	2ch ^{*2}	5.1ch ^{*1/*3}
LPCM	7.1ch (48KHz/96KHz)	2ch ^{*2}	—
	5.1ch (192KHz)	2ch ^{*2}	—

*1 Core only

*2 Down mixed

*3 When Secondary Audio is set to "On", the audio is output as 48KHz.

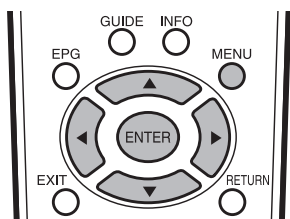
Blu-ray disc Setup

Version

When you select “Version of BD”, the system software version is displayed.

USB Memory Management

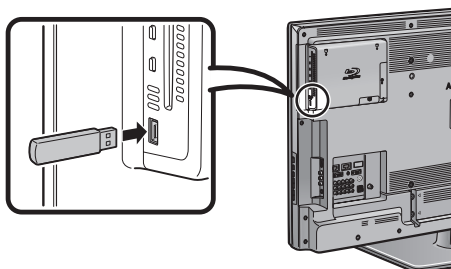
The following instructions explain how to delete data such as the Virtual Package data copied to a USB memory device.



CAUTION

- Do not remove the USB memory device or unplug the AC cord while the erase is being performed.
- Do not use a USB extension cable when connecting a USB memory device to the BD STORAGE/SERVICE terminal on the Disc Drive of this TV.
- Using a USB extension cable may prevent the Disc Drive from performing correctly.

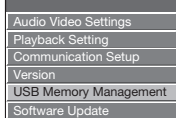
- 1 Insert the USB memory device into the BD STORAGE/SERVICE terminal on the Disc Drive of this TV.



- 2 Press **MENU** to display the MENU screen, and then press **◀/▶** to select “Option”.

- 3 Press **▲/▼** to select “Blu-ray disc Setup”, and then press **ENTER**.

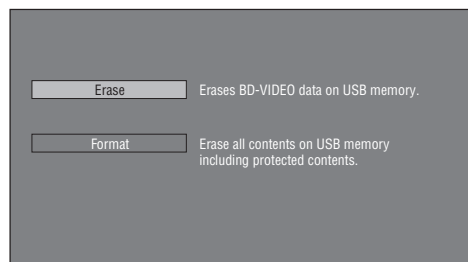
- 4 Press **▲/▼** to select “USB Memory Management”, and then press **ENTER**.



- “No USB memory” appears when no USB memory is inserted.

- 5 Press **▲/▼** to select “Erase” or “Format”, and then press **ENTER**.

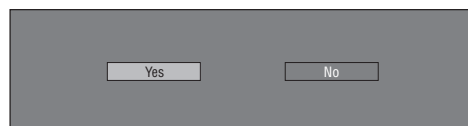
Erase: Deletes only BD-VIDEO data contents.
Format: Deletes all contents.



NOTE

- Data which has been saved to the Disc Drive’s internal memory (game score, etc.) will also be deleted.

- 6 Press **◀/▶** to select “Yes”, and then press **ENTER**.



- 7 Start the process.
 - The screen for the current operation will display.

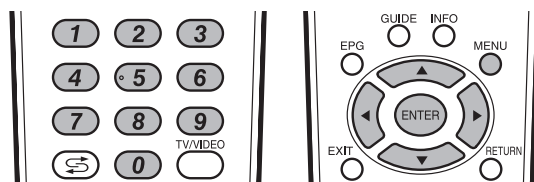


- 8 Press **ENTER**.

Software Update

This function allows software updates by inserting a USB memory device with the update file into the BD STORAGE/SERVICE terminal on the Disc Drive of this TV.

To check for the availability of a software update, visit www.sharp.com.sg.



CAUTION

- Do not remove the USB memory device or unplug the AC cord while the software is being updated.
- Do not use a USB extension cable when connecting a USB memory device to the BD STORAGE/SERVICE terminal on the Disc Drive of this TV.
- Using a USB extension cable may prevent the Disc Drive from performing correctly.

Software Update (continued)

1 Insert the USB memory device with the update file into the BD STORAGE/SERVICE terminal on the Disc Drive of this TV.

2 Press **MENU** to display the MENU screen, and then press **◀▶** to select "Option".

3 Press **▲▼** to select "Blu-ray disc Setup", and then press **ENTER**.

4 Press **▲▼** to select "Software Update", and then press **ENTER**.

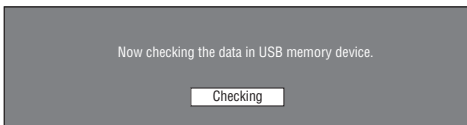
- If you have not yet set the PIN code, go to step 6.



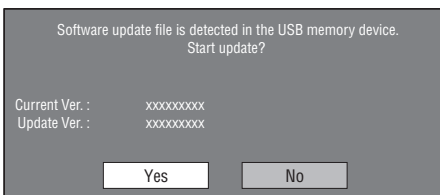
5 Press **ENTER** to start checking data in the USB memory device.



6 During the data checking, "Checking" blinks.

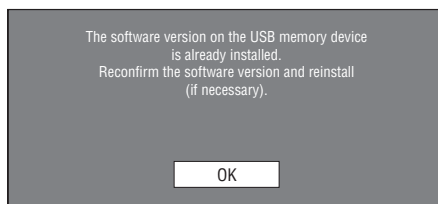
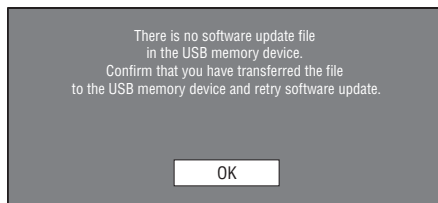
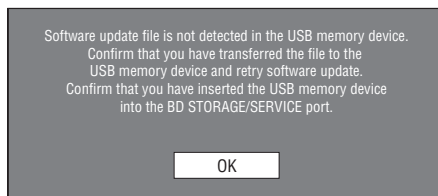


- The current version of the Disc Drive software and the version of the update file on the USB memory device are displayed. To update the Disc Drive software with update file, select "Yes", and press **ENTER**.



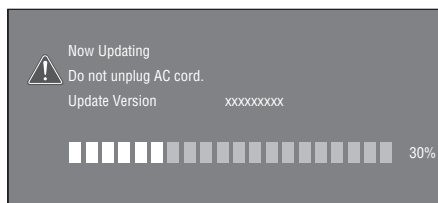
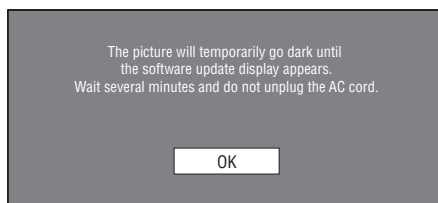
- If the USB memory device is not properly installed or the correct update file cannot be found on the USB memory device, an error message is displayed.

Check the file on the USB memory device, and then reinsert the USB memory device correctly.



7 Press **ENTER** to start updating.

- The screen becomes dark for a while until the update screen can be displayed. Please wait for the update screen to appear. Do not unplug the AC cord.



8 When the software is successfully updated, a screen is displayed indicating that the update process is completed.

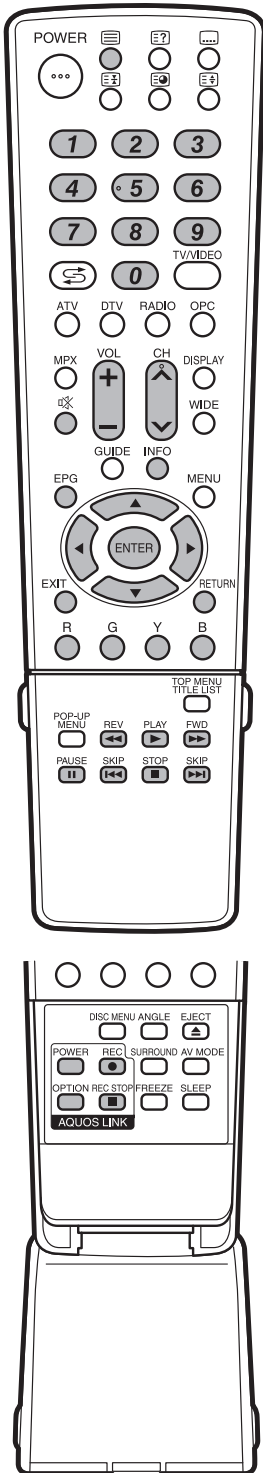
- If the update has failed, check the file in the USB device and try Software Update again.

9 Press **POWER** on the TV to turn off the TV.

10 Remove the USB memory device.

AQUOS LINK

Controlling HDMI devices using AQUOS LINK



What is AQUOS LINK?

Using the HDMI CEC protocol, with AQUOS LINK you can interactively operate compatible system devices (AV amplifier, DVD player/recorder, Blu-ray player/recorder) using a single remote control unit.

What you can do with AQUOS LINK

✓ One Touch Recording (DTV only)

You do not have to search for the remote control unit of your recording device. Press the **REC** or **REC STOP** buttons inside the flip cover to start/stop recording what you see on the recorder.

✓ One Touch Play

While the TV is in standby mode, it will automatically turn on and play back the image from the HDMI source.

✓ Single remote control operation

AQUOS LINK automatically recognises the connected HDMI devices and you can control the TV and the devices as if using a universal remote control unit.

✓ Operating Title list of external devices

In addition to displaying the TV's own Timer list (Pages 45 and 46), you can also call up the external player's Top menu or AQUOS BD Player's/AQUOS Recorder's Title list provided that the devices support AQUOS LINK.

✓ Multiple control of HDMI devices

You can select which HDMI device to operate using the **OPTION** button.

NOTE

- When you use AQUOS LINK, make sure to use a certified HDMI cable.
- Point the remote control unit toward the TV, not to the connected HDMI device.
- Video noise may occur depending on the type of HDMI cable used. Make sure to use a certified HDMI cable.
- Up to three HDMI recording devices, one AV amplifier and two players can be connected using this system.
- These operations affect the HDMI device selected as the current external source. If the device does not operate, turn on the device and select the appropriate external source using **TV/VIDEO**.
- When you insert/remove HDMI cables or change connections, turn on all connected HDMI devices before turning on the TV. Confirm that picture and audio are correctly output by selecting "INPUT1", "INPUT2" or "INPUT3" from the "INPUT SOURCE" menu.

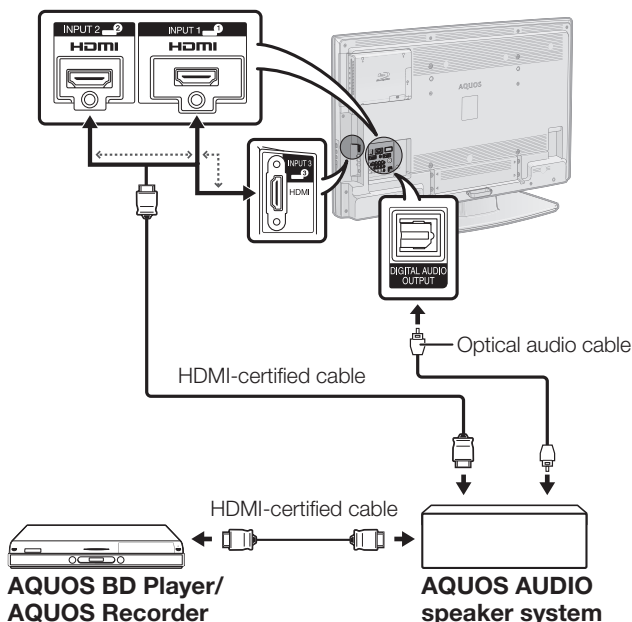
AQUOS LINK connection

First connect the AQUOS AUDIO speaker system or an AQUOS BD Player/AQUOS Recorder that supports the HDMI CEC protocol.

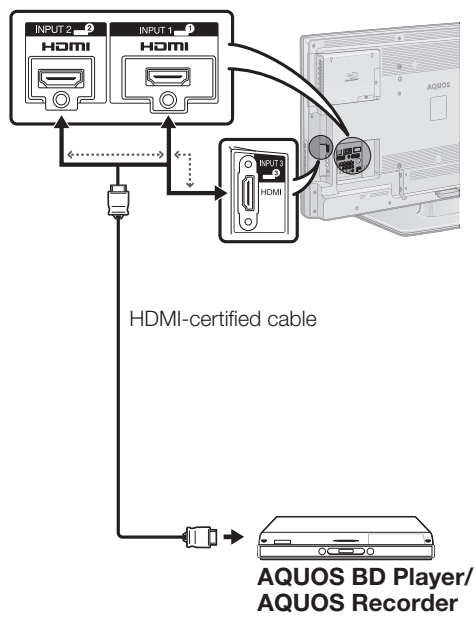
NOTE

- Refer to the operation manual of the device to be connected for further details.
- After unplugging connection cables or changing the connection pattern, turn on the power of the TV after all relevant device's power have been turned on. Change the external input source by pressing **TV/VIDEO**, select the appropriate external source and verify the audiovisual output.
- The cables illustrated in the following explanation are commercially available items.

Connecting an AQUOS BD Player/AQUOS Recorder via the AQUOS AUDIO speaker system



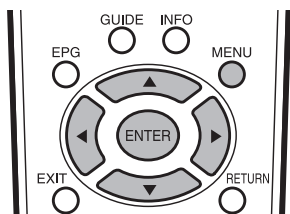
Connecting an AQUOS BD Player/AQUOS Recorder only



AQUOS LINK setup

AQUOS LINK control

Set to "On" to enable HDMI CEC functions.



- 1 Press **MENU** and the MENU screen displays.
- 2 Press **◀/▶** to select "Option".
- 3 Press **▲/▼** to select "AQUOS LINK setup", and then press **ENTER**.

- 4 Press **▲/▼** to select "AQUOS LINK control", and then press **ENTER**.

AQUOS LINK control	Setting for AQUOS LINK control
Auto power on	
Selecting recorder	
Selecting channel key	
Using genre info.	<input type="checkbox"/> On <input type="checkbox"/> Off

- 5 Press **◀/▶** to select "On", and then press **ENTER**.
- 6 Press **MENU** to exit.

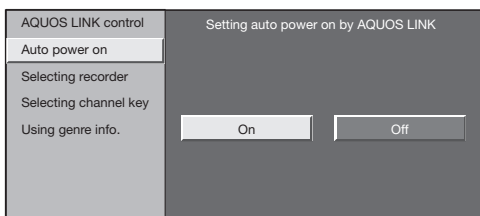
AQUOS LINK

Auto power on

If this is activated, the One Touch Play function is enabled. While the TV is in standby mode, it automatically turns on and plays back the image from the HDMI source.

1 Repeat steps 1 to 3 in **AQUOS LINK control**.

2 Press **▲/▼** to select “Auto power on”, and then press **ENTER**.



3 Press **◀/▶** to select “On”, and then press **ENTER**.

4 Press **MENU** to exit.

NOTE

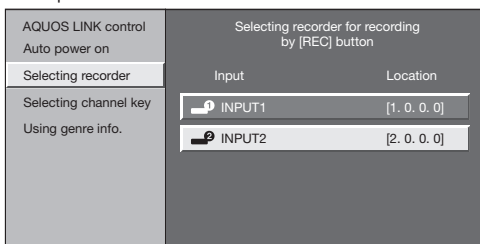
- The factory default for this item is “Off”.

Selecting recorder

Here, you can select a recorder for the recording from several connected recorders.

1 Repeat steps 1 to 3 in **AQUOS LINK control**.

2 Press **▲/▼** to select “Selecting recorder”, and then press **ENTER**.

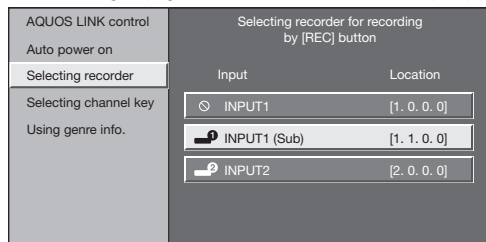


3 Select the recorder, and then press **ENTER**.

4 Press **MENU** to exit.

NOTE

- If you have connected the AQUOS AUDIO speaker system between the TV and an AQUOS Recorder, the external source's indication changes (e.g. from “INPUT 1” to “INPUT 1 (Sub)”).

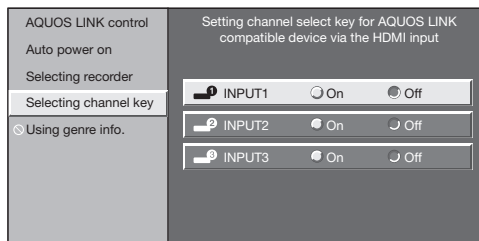


Selecting channel key

This function allows you to select the channel of the connected HDMI device using the TV's remote control unit.

1 Repeat steps 1 to 3 in **AQUOS LINK control**.

2 Press **▲/▼** to select “Selecting channel key”, and then press **ENTER**.



3 Press **▲/▼** to select the input source of the connected HDMI device you want to control using the TV's remote control unit, and then press **ENTER**.

4 Press **◀/▶** to select “On”, and then press **ENTER**.

Using genre info.

This function allows you to automatically switch to the appropriate sound mode depending on the genre information included in the digital broadcast.

1 Repeat steps 1 to 3 in **AQUOS LINK control**.

2 Press **▲/▼** to select “Using genre info.”, and then press **ENTER**.

3 Press **◀/▶** to select “On”, and then press **ENTER**.

Operating an AQUOS LINK device

AQUOS LINK allows you to operate the HDMI-connected device with a single remote control unit.

1 Press **PLAY ▶** to start playback of a title.

- See page 75, section “**Playback of titles using AQUOS LINK**” if you want to start playback using the list of the titles of the AQUOS BD Player/ AQUOS Recorder.

2 Press **FWD ▶▶** to fast forward.

Press **REV ◀◀** to reverse.

Press **STOP ■** to stop.

Press **POWER** to turn the HDMI-connected device on/off.

Press **PAUSE ||** to pause.

Press **SKIP ▶▶▶** to skip forward.

Press **SKIP ◀◀◀** to skip reverse.

NOTE

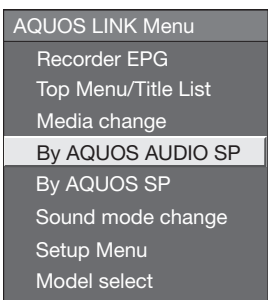
- This function may not be available by a connected device.

Listening with the AQUOS AUDIO speaker system

You can choose to listen to the TV sound only from the AQUOS AUDIO speaker system.

1 Open the remote control unit's flip cover, and then press **OPTION**.

2 Press **▲/▼** to select "By AQUOS AUDIO SP", and then press **ENTER**.



- The sound from the TV speaker and headphone terminal is silenced and only the sound from the AQUOS AUDIO speaker system is audible.

Listening with the AQUOS TV speaker system

You can choose to listen to the TV sound only from the AQUOS TV speaker system.

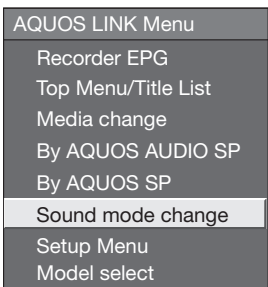
1 Open the remote control unit's flip cover, and then press **OPTION**.

2 Press **▲/▼** to select "By AQUOS SP", and then press **ENTER**.

Manually changing the AQUOS AUDIO speaker system's sound mode

1 Open the remote control unit's flip cover, and then press **OPTION**.

2 Press **▲/▼** to select "Sound mode change".



3 The sound mode changes every time you press **ENTER**.

- Refer to the operation manual of the AQUOS AUDIO speaker system for details.

Calling up the menu of an external device connected with the TV via HDMI

You can call up the menu of an HDMI CEC-compatible external device (player, recorder, decoder, etc.) using the "Setup Menu" function.

1 Open the remote control unit's flip cover, and then press **OPTION**.

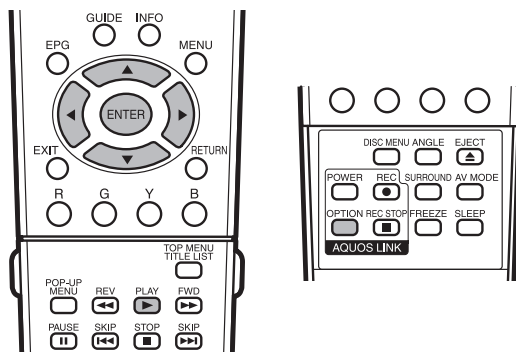
2 Press **▲/▼** to select "Setup Menu", and then press **ENTER**.

NOTE

- If a connected device does not have this function or the device is in a status where the menu cannot be displayed (recording, entering standby, etc.), this function may not be available.

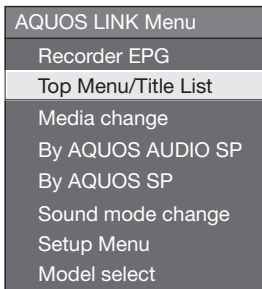
Playback of titles using AQUOS LINK

This section explains how to play back a title in the AQUOS BD Player/AQUOS Recorder.



1 Open the remote control unit's flip cover, and then press **OPTION**.

2 Press **▲/▼** to select "Top menu/Title list", and then press **ENTER**.



- The linked recorder now powers on and the TV automatically selects the appropriate external input source.
- The title list data from the connected AQUOS BD Player/AQUOS Recorder displays.

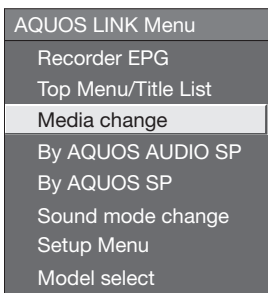
3 Select the title with **▲/▼/◀/▶**, and then press **PLAY ▶**.

Selecting media type for CEC-compatible recorder

If your recorder has multiple storage media, select the media type here.

1 Open the remote control unit's flip cover, and then press **OPTION**.

2 Press **▲/▼** to select "Media change", and then press **ENTER**.



3 Select the desired medium, such as DVD recorder or HDD. The media type changes every time you press **ENTER**.

HDMI device selection

If multiple HDMI devices are connected in a daisy chain, you can specify which device to control here.

1 Open the remote control unit's flip cover, and then press **OPTION**.

2 Press **▲/▼** to select "Model select", and then press **ENTER**. The HDMI device changes every time you press **ENTER**.

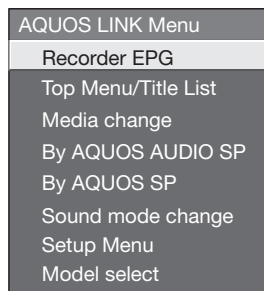
Recording via the AQUOS Recorder EPG (only for recorders)

You can call up the CEC-compatible recorder's EPG and preset timer recordings using the TV's remote control unit.

1 Open the remote control unit's flip cover, and then press **OPTION**.

2 Press **▲/▼** to select "Recorder EPG", and then press **ENTER**.

- The external input source switches and the recorder's EPG is displayed.



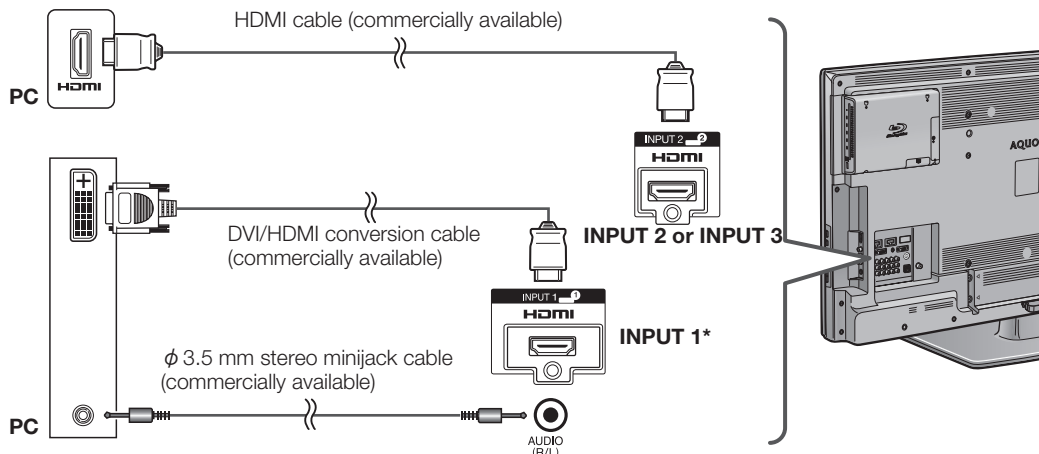
3 Select the programme to record.

- Refer to the operation manual of the recorder for details.

Connecting a PC

Use the PC terminals to connect a PC.

HDMI Connection

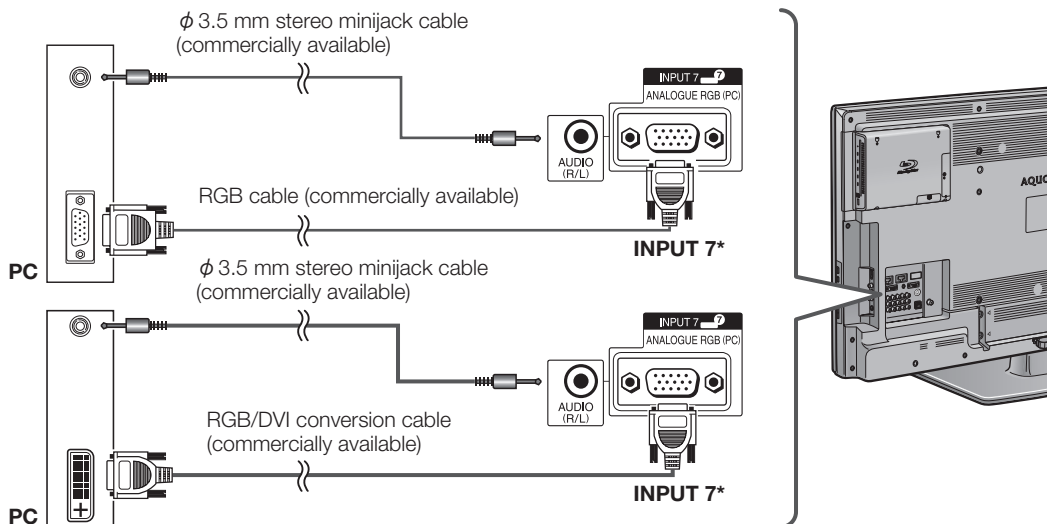


* When using the INPUT 1 terminal, you must select the proper item in the "PC audio select" menu depending on the type of HDMI cable connected. (See page 78.)

NOTE

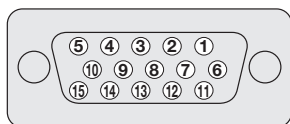
- The PC INPUT terminals are DDC1/2B-compatible.
- Refer to page 81 for a list of PC signals compatible with the TV.

Analogue Connection



* When using the INPUT 7 terminal, you must select "INPUT7(RGB)" in the "PC audio select" menu. (See page 78.)

Signal names for 15-pin mini D-sub connector



Pin No.	Signal name	Pin No.	Signal name	Pin No.	Signal name
①	R	⑥	GND (Ground)	⑪	Not connected
②	G	⑦	GND (Ground)	⑫	SDA
③	B	⑧	GND (Ground)	⑬	HD
④	Not connected	⑨	+5V	⑭	VD
⑤	CSYNC	⑩	GND (Ground)	⑮	SCL

NOTE

- Macintosh adaptor may be required for use for some Macintosh computers.
- Pin No. ⑤ is not used for inputting the signal.

Connecting a PC

PC audio select

When using the INPUT 7 terminal or INPUT 1 terminal, you must select which terminal uses the AUDIO (R/L) jack for analogue audio input.

Selected item	Description
INPUT1(HDMI)	When connecting devices (including a PC) with DVI/HDMI cable to the INPUT 1 terminal and inputting analogue audio signals from the AUDIO (R/L) jack.
INPUT7(RGB)	When connecting a PC to the INPUT 7 terminal, and inputting analogue audio signals from the AUDIO (R/L) jack.

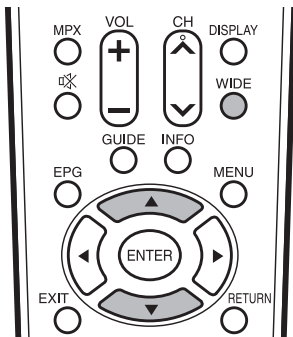
NOTE

- You must set this to "INPUT7(RGB)" when connecting devices (including a PC) with an HDMI-certified cable to the INPUT 1 terminal. If "INPUT1(HDMI)" is set, there will be no sound output.

Displaying a PC image on the screen

Selecting the picture size

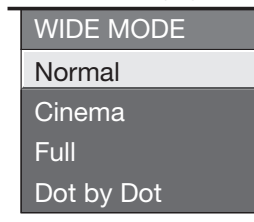
You can select the picture size as illustrated below.



1

Press **WIDE**.

- The WIDE MODE menu displays.



(Example)

2

Press **WIDE** or **▲/▼** to select a desired item on the menu.

NOTE

- Connect the PC before making adjustments.
- Selectable screen size may vary with input signal type.

EXAMPLE

Screen size images.

Input Signal 1024 × 768	Normal Keeps the original aspect ratio in a full screen display.	Cinema For viewing wide screen programs. The top and bottom of the image is slightly cropped.	Full An image fully fills the screen.	Dot by Dot Detects the resolution of the signal and displays an image with the same number of pixels on the screen.
Input Signal 1360 × 768	Normal Keeps the original aspect ratio in a full screen display.		Full An image fully fills the screen.	Dot by Dot Detects the resolution of the signal and displays an image with the same number of pixels on the screen.

Connecting a PC

Adjusting the PC image automatically

This function enables the screen to be automatically adjusted to its best possible condition when the analogue terminals of the TV and PC are connected with a commercially available DVI/D-sub conversion cable, etc.

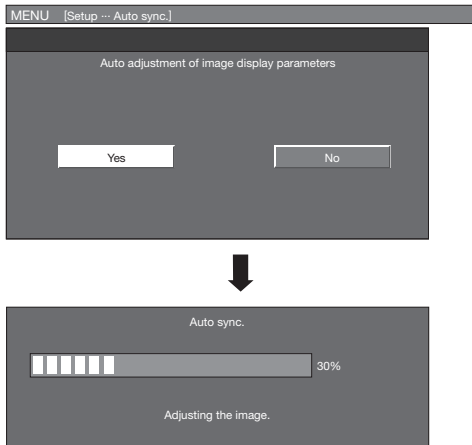
1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select "Setup".

3 Press **▲/▼** to select "Auto sync.", and then press **ENTER**.

4 Press **◀/▶** to select "Yes", and then press **ENTER**.

- Auto sync. starts and "Adjusting the image" displays.



5 Press **MENU** to exit.

NOTE

- When Auto sync. is successful, "Auto sync completed successfully" displays. If not, Auto sync. failed.
- Auto sync. may fail even if "Auto sync completed successfully" displays.
- Auto sync. may fail if the computer image has low resolution, has unclear (black) edges, or is moved while executing Auto sync.
- Be sure to connect the PC to the TV and switch it on before starting Auto sync.
- Auto sync. can be executed only when inputting analogue signals.

Adjusting the PC image manually

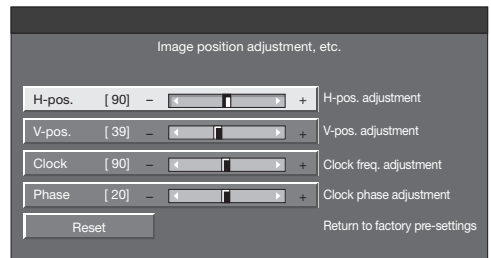
Ordinarily you can easily adjust the picture as necessary to change image position using Auto sync. In some cases, however, manual adjustment is needed to optimise the image.

1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select "Setup".

3 Press **▲/▼** to select "Fine sync.", and then press **ENTER**.

4 Press **▲/▼** to select the specific adjustment item.



Selected item	Description
H-pos.	Centres the image by moving it to the left or right.
V-pos.	Centres the image by moving it up or down.
Clock	Adjusts when the image flickers with vertical stripes.
Phase	Adjusts when characters have low contrast or when the image flickers.

5 Press **◀/▶** to adjust the item to your desired position.

6 Press **MENU** to exit.

NOTE

- For resetting all adjustment items to the factory preset values, press **▲/▼** to select "Reset", and then press **ENTER**.
- "Clock" and "Phase" in the "Fine sync." menu can be adjusted only when inputting analogue signals.

Connecting a PC

PC Control of the TV

- When a programme is set, the TV can be controlled from the PC using the RS-232C terminal. The input signal (PC/video) can be selected, the volume can be adjusted and various other adjustments and settings can be made, enabling automatic programmed playing.
- Attach an RS-232C cable cross-type (commercially available) to the Din/D-sub RS-232C for the connections.

NOTE

- This operation system should be used by a person who is accustomed to using PCs.

Communication conditions

Set the RS-232C communications settings on the PC to match the communications conditions of the TV. The communications settings of the TV are as follows:

Baud rate:	9,600 bps
Data length:	8 bits
Parity bit:	None
Stop bit:	1 bit
Flow control:	None

Communication procedure

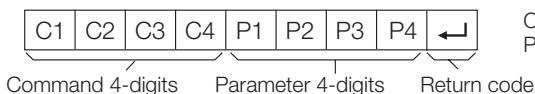
Send the control commands from the PC via the RS-232C connector.

The TV operates according to the received command and sends a response message to the PC.

Do not send multiple commands at the same time. Wait until the PC receives the OK response before sending the next command.

Command format

Eight ASCII codes + CR



Command 4-digits: Command. The text of four characters.
Parameter 4-digits: Parameter 0 – 9, space, ?

Parameter

Input the parameter values, aligning left, and fill with space(s) for the remainder. (Be sure that four values are input for the parameter.)

When the input parameter is not correct, "ERR" returns. (Refer to "Response code format".)

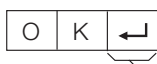
0			
0	0	0	9
-	3	0	
1	0	0	
0	0	5	5

When "?" is input for some commands, the present setting value responds.

?			
?	?	?	?

Response code format

Normal response



Return code (ODH)

Problem response (communication error or incorrect command)



Return code (ODH)

Connecting a PC

PC compatibility chart

Resolution		Horizontal Frequency	Vertical Frequency	Analogue (D-Sub)	Digital (HDMI)	VESA Standard
VGA	640 × 480	31.5 kHz	60 Hz	✓	✓	✓
SVGA	800 × 600	37.9 kHz	60 Hz	✓	✓	✓
XGA	1024 × 768	48.4 kHz	60 Hz	✓	✓	✓
WXGA	1360 × 768	47.7 kHz	60 Hz	✓	✓	✓
SXGA	1280 × 1024	64.0 kHz	60 Hz	✓	✓	✓
SXGA+	1400 × 1050	65.3 kHz	60 Hz		✓	✓

NOTE

- This TV has only limited PC compatibility, correct operation can only be guaranteed if the video card conforms exactly to the VESA 60Hz standard. Any variations from this standard will result in picture distortions.

DDC is a registered trademark of Video Electronics Standards Association. Power Management is a registered trademark of Sun Microsystems, Inc. VGA and XGA are registered trademarks of international Business Machines Corp.

RS-232C commands list

Commands

- Commands not indicated here are not guaranteed to operate.

CONTROL ITEM	COMMAND	PARAMETER	CONTROL CONTENTS
POWER SETTING	P O W R 0	_ _ _ _	POWER OFF (STANDBY)
INPUT SELECTION A	I T G D	_ _ _ _	INPUT SWITCHING (TOGGLE)
	I T V D	_ _ _ _	TV (CHANNEL FIXED)
	I B D D	_ _ _ _	Blu-ray
	I D T V	_ _ _ _	DTV (CHANNEL FIXED)
	I A V D *	_ _ _ _	INPUT1-7 (1-7)
CHANNEL	D C C H *	* _ _ _	ATV DIRECT CHANNEL (1-99)
	C H U P	_ _ _ _	CHANNEL UP
	C H D W	_ _ _ _	CHANNEL DOWN
	D T V D *	* _ _ _	DTV DIRECT CHANNEL (1-999)
	D T U P	_ _ _ _	DTV CHANNEL UP
	D T D W	_ _ _ _	DTV CHANNEL DOWN
INPUT SELECTION B	I N P 4 0	_ _ _ _	INPUT4 (Auto)
	I N P 4 1	_ _ _ _	INPUT4 (COMPONENT)
	I N P 4 2	_ _ _ _	INPUT4 (S-VIDEO)
	I N P 4 3	_ _ _ _	INPUT4 (VIDEO)
	I N P 6 0	_ _ _ _	INPUT6 (Auto)
	I N P 6 1	_ _ _ _	INPUT6 (COMPONENT)
	I N P 6 3	_ _ _ _	INPUT6 (VIDEO)
	A V M O D 0	_ _ _ _	TOGGLE
AV MODE SELECTION	A V M D 1	_ _ _ _	STANDARD
	A V M D 2	_ _ _ _	MOVIE
	A V M D 3	_ _ _ _	GAME
	A V M D 4	_ _ _ _	USER
	A V M D 5	_ _ _ _	DYNAMIC (Fixed)
	A V M D 6	_ _ _ _	DYNAMIC
	A V M D 7	_ _ _ _	PC
	A V M D 1 0 0	_ _ _ _	AUTO

NOTE

- If an underbar (_) appears in the parameter column, enter a space.
- If an asterisk (*) appears, enter a value in the range indicated in brackets under CONTROL CONTENTS.

CONTROL ITEM	COMMAND	PARAMETER	CONTROL CONTENTS
VOLUME	V O L M *	* _ _ _	VOLUME (0-60)
POSITION	H P O S *	* * * _	H-POSITION (AV) (-nn - nn)
	H P O S *	* * * _	H-POSITION (PC) (-nn - nn)
	V P O S *	* * * _	V-POSITION (AV) (-nn - nn)
	V P O S *	* * * _	V-POSITION (PC) (-nn - nn)
	C L C K *	* * * _	CLOCK (0-180)
	P H S E *	* * * _	PHASE (0-40)
WIDE MODE	W I D E 0	_ _ _ _	TOGGLE (AV)
	W I D E 1	_ _ _ _	NORMAL (AV)
	W I D E 2	_ _ _ _	ZOOM 14:9 (AV)
	W I D E 3	_ _ _ _	PANORAMA (AV)
	W I D E 4	_ _ _ _	FULL (AV)
	W I D E 5	_ _ _ _	CINEMA 16:9 (AV)
	W I D E 6	_ _ _ _	CINEMA 14:9 (AV)
	W I D E 7	_ _ _ _	NORMAL (PC)
	W I D E 8	_ _ _ _	CINEMA (PC)
	W I D E 9	_ _ _ _	FULL (PC)
	W I D E 1 0	_ _ _ _	DOT BY DOT (AV/PC)
W I D E 1 1	_ _ _ _	UNDERSCAN (AV)	
MUTE	M U T E 0	_ _ _ _	TOGGLE
	M U T E 1	_ _ _ _	MUTE ON
	M U T E 2	_ _ _ _	MUTE OFF
SRS TS HD	A C S U 0	_ _ _ _	SRS TS HD TOGGLE
	A C S U 1	_ _ _ _	SRS TS HD ON
	A C S U 2	_ _ _ _	SRS TS HD OFF
AUDIO CHANGE	A C H A _	_ _ _ _	TOGGLE
SLEEP TIMER	O F T M 0	_ _ _ _	OFF
	O F T M 1	_ _ _ _	SLEEP TIMER 30 MIN
	O F T M 2	_ _ _ _	SLEEP TIMER 1 HOUR
	O F T M 3	_ _ _ _	SLEEP TIMER 1 HOUR 30 MIN
	O F T M 4	_ _ _ _	SLEEP TIMER 2 HOUR
	O F T M 5	_ _ _ _	SLEEP TIMER 2 HOUR 30 MIN
TEXT	T E X T 0	_ _ _ _	TEXT OFF
	T E X T 1	_ _ _ _	TEXT ON (TOGGLE)
	D C P G *	* * * _	DIRECT PAGE JUMP (100-899)


Teletext function

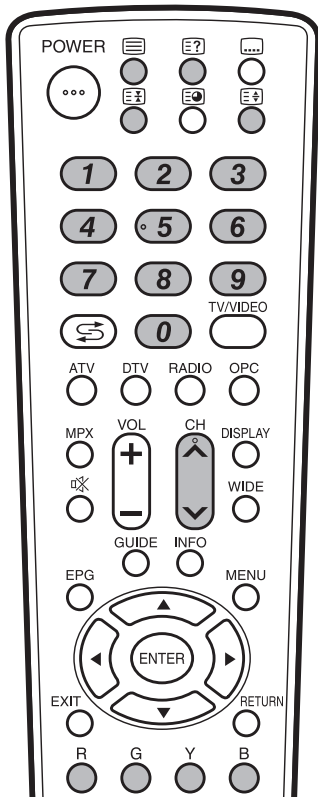
About Teletext

What is Teletext?




Teletext broadcasts pages of information and entertainment to specially equipped television sets. Your TV receives Teletext signals broadcast by a TV network, and decodes them into graphical format for viewing. News, weather reports, sports information, stock exchange prices and programme previews are among the many services available.

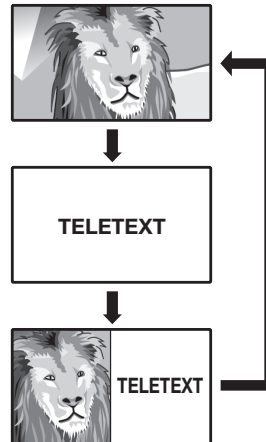
Teletext mode

Teletext is turned on/off with  on the remote control unit. You can operate your TV in Teletext mode directly by inputting commands with the remote control unit.





Turning on and off Teletext

- 1 Select a TV channel or external input source providing the Teletext programme.
- 2 Press  to display the Teletext.
- 3 Press  again to display the Teletext on the right screen and normal image on the left screen.
 - Each time you press , the screen switches as shown to the upper right.
 - If you select a programme with no Teletext signal, "No Teletext available" is displayed.
 - The same message displays during other modes if no Teletext signal is available.



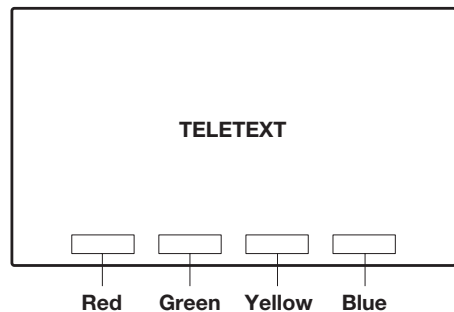
When viewing the Teletext information

- Press **CH**  to increase the page number.
- Press **CH**  to decrease the page number.

Button functions

Colour (Red/Green/Yellow/Blue):

You can select a group or block of pages displayed in the coloured brackets at the bottom of the screen by pressing the corresponding **Colour (Red/Green/Yellow/Blue)** on the remote control unit.

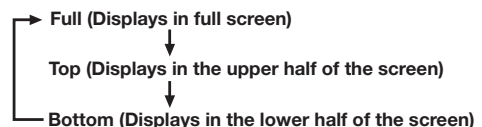


0 - 9:


Directly select any page from 100 to 899 by using **0 - 9**.


(Top/Bottom/Full):

Each time you press , the TELETEXT image switches as shown below.




(Reveal hidden for TELETEXT):

To reveal hidden information such as an answer to a quiz, press .

- Press  again to hide the information.

(Hold):

To stop updating Teletext pages automatically, press .

- Press  again to release the hold mode.

Teletext function

Teletext language setting

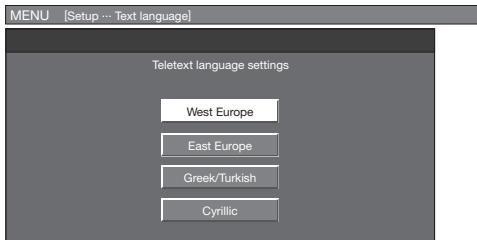
If Teletext information does not display correctly, perform the procedure below. Select from among 4 kinds of language tables: West Europe, East Europe, Greek/Turkish, Cyrillic. Each table is compatible with the Teletext languages listed below.

1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select "Setup".

3 Press **▲/▼** to select "Text language", and then press **ENTER**.

4 Press **▲/▼** to select receivable teletext broadcasting language in your country.



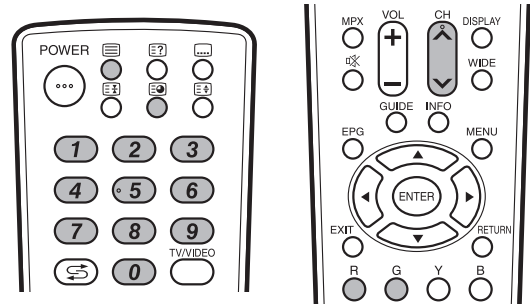
- West Europe – English, French, Scandinavian, Czech, German, Spanish, Italian
- East Europe – Polish, French, Scandinavian, Czech, German, Slovenian/Croatian, Italian, Rumanian
- Greek/Turkish – English, French, Scandinavian, Turkish, German, Spanish, Italian, Greek
- Cyrillic – English, Russian, Estonian, Czech, German, Spanish, Ukrainian, Lettish

NOTE

- Teletext can display only when it is sent by a network. Not used to convert between languages.

Displaying Subpages

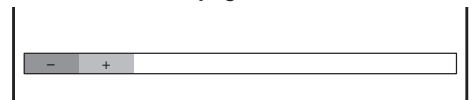
You can display subpages as they are transmitted.



1 Press **☰** to display Teletext.

2 Press **☰** to display the subpage as shown below.

Subpage screen



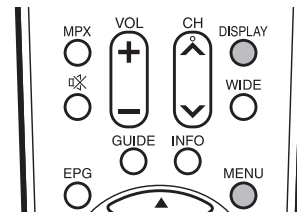
3 Select the desired subpage by using **CH/▲**, **CH/▼**, **Red** or **Green**.

- **0 – 9** directly selects the desired subpage.

4 Press **☰** to exit the subpage screen.

Time display

You can display the time information included in the Teletext broadcast.



1 Select a TV channel providing Teletext information.

(The time information is automatically captured.)

2 Press **DISPLAY**. The channel display will appear on the display.

3 Press **DISPLAY** again. The channel display about three seconds on the screen. Time information will continuously display on the lower right of the screen.

4 Even when you change the TV channel, you can display the time information with steps 2 to 3 above.

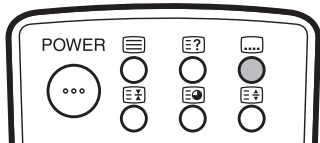
NOTE

- The time display cannot be stored once the power is turned off. When you turn on the power, perform steps 1 to 4 again.
- If acquired successfully the time information will appear in the upper-right corner of the screen by pressing **MENU**.

Teletext function

Displaying Subtitles

You can display subtitles as they are transmitted.



- 1 Press to display the subtitle.
 - Subtitle is updated by information sent by the broadcasting station.

- 2 Press to exit the subtitle screen.

NOTE

- Subtitle will not be displayed when the service does not contain subtitle information.

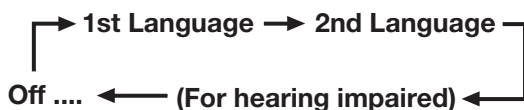
Switching subtitle languages

Each time you press on the remote control, the subtitle switches

Set "For hearing impaired" to "Yes"



Set "For hearing impaired" to "No"



■ Selecting the Language

- 1 Press **MENU** and the MENU screen displays.
- 2 Press to select "Digital setup".
- 3 Press to select "Subtitle", and then press **ENTER**.
- 4 Press to select "1st language" or "2nd language", and then press **ENTER**.
- 5 Press to select the desired language, and then press **ENTER**.

■ Displaying subtitles for the hearing impaired

You can display subtitles for the hearing impaired in the Teletext broadcast.

- 1 Press **MENU** and the MENU screen displays.
- 2 Press to select "Digital setup".
- 3 Press to select "Subtitle", and then press **ENTER**.
- 4 Press to select "For hearing impaired", and then press **ENTER**.
- 5 Press to select "Yes", and then press **ENTER**.

Appendix

Troubleshooting

The problems described below are not always caused by malfunctions. Check the TV again before having the TV serviced.

Problem	Possible Solution
<ul style="list-style-type: none"> No power. 	<ul style="list-style-type: none"> Check if you pressed POWER on the remote control unit. (See page 18.) If the indicator on the TV lights up red, press POWER. Is the AC cord disconnected? (See page 11.) Has the power been turned on? (See page 18.)
<ul style="list-style-type: none"> Unit cannot be operated. 	<ul style="list-style-type: none"> External influences such as lightning, static electricity, etc., may cause improper operation. In this case, operate the unit after first turning the power off the TV or unplugging the AC cord and re-plugging it in after 1 or 2 minutes.
<ul style="list-style-type: none"> Remote control unit does not operate. 	<ul style="list-style-type: none"> Are batteries inserted with polarity (+, -) aligned? (See page 17.) Are batteries worn out? (Replace with new batteries.) Are you using it under strong or fluorescent lighting? Is a fluorescent light shining on the remote control sensor?
<ul style="list-style-type: none"> Picture is cut off. 	<ul style="list-style-type: none"> Is the image position correct? (See page 38.) Are screen mode adjustments such as picture size made correctly? (See pages 33, 34 and 78.)
<ul style="list-style-type: none"> Strange colour, light colour, or dark, or colour misalignment. 	<ul style="list-style-type: none"> Adjust the picture tone. (See pages 36 to 38.) Is the room too bright? The picture may look dark in a room that is too bright. Check the colour system setting. (See pages 25 and 50.) Check the HDMI auto view setting. (See page 48.)
<ul style="list-style-type: none"> Power is suddenly turned off. 	<ul style="list-style-type: none"> The unit's internal temperature has increased. Remove any objects blocking the vent or clean. Check the ECO setting. (See page 32.) Is the sleep timer set? (See page 32.)
<ul style="list-style-type: none"> No picture. 	<ul style="list-style-type: none"> Is the connection to external equipment correct? (See pages 14 and 15.) Is the correct input selected? (See page 49.) Is the picture adjustment correct? (See pages 36 to 38.) Is the antenna connected properly? (See page 11.) Is "On" selected in "Audio only"? (See page 28.)
<ul style="list-style-type: none"> No sound. 	<ul style="list-style-type: none"> Is the volume too low? (See page 23.) Make sure that headphones are not connected. (See page 9.)
<ul style="list-style-type: none"> The TV sometimes makes a cracking sound. 	<ul style="list-style-type: none"> This is not a malfunction. This happens when the cabinet slightly expands and contracts according to changes in temperature. This does not affect the TV's performance.

Troubleshooting-Digital broadcasting

The error message about reception of broadcast

The example of an error message displayed on a screen	Error code	Possible Solution
<ul style="list-style-type: none"> Failed to receive broadcast. 	E202	<ul style="list-style-type: none"> Check the antenna cable. Check that the antenna is correctly setup.
<ul style="list-style-type: none"> No broadcast now. 	E203	<ul style="list-style-type: none"> Check the broadcast time in the program guide.

Troubleshooting-Disc Playback

Problem	Possible Solution
<ul style="list-style-type: none"> No picture. 	<ul style="list-style-type: none"> Take out the disc and clean it.
<ul style="list-style-type: none"> Video stops. 	<ul style="list-style-type: none"> Has the TV been subjected to shock or impact? Are you using it in an unstable location? The TV will stop if it senses shock or vibration.
<ul style="list-style-type: none"> No sound or distorted sound from speakers. 	<ul style="list-style-type: none"> There is no sound during still mode, slow motion playback, fast forward and fast reverse. Take out the disc and clean it. Audio may not be output depending on the audio recording status, such as when audio other than an audio signal or non-standard audio is recorded for the audio content of the disc.
<ul style="list-style-type: none"> Cannot play a disc. 	<ul style="list-style-type: none"> Make sure that region code on the disc matches that of this TV. The TV can only play BD-VIDEO discs with Region Code "B" or no Region Code. BD-RE Version 1.0 discs cannot be played. To enable playback of a recorded DVD, finalize the disc in the recorder that was used to create it. Take out the disc and clean it. Make sure that the disc is loaded properly. The disc should be loaded with the playback side facing the back of the TV. If there is condensation in the TV, take suitable countermeasures. Proper playback may be impossible due to the state of the disc recording, a scratched, warped or dirty disc, the state of the pick-up, or compatibility issues between this TV and the disc being used. BD discs with video material recorded on other recorders using long-play mode may not play in this TV. When the recorded time of a disc is unusually short, playback may not be possible. The TV cannot play back video which was not recorded normally.
<ul style="list-style-type: none"> During playback of a commercial BD-VIDEO or DVD-VIDEO disc, the soundtrack switches between dubbed and original language. 	<ul style="list-style-type: none"> Some commercially available BD-VIDEO and DVD-VIDEO discs contain the soundtrack as used during TV broadcast of the material. During parts where there is no dubbed sound, the TV will switch to the original soundtrack, which may result in a change in language.
<ul style="list-style-type: none"> Cannot play commercially available BD-VIDEO or DVD-VIDEO disc. 	<ul style="list-style-type: none"> If the BD-VIDEO or DVD-VIDEO disc contains viewing restrictions according to age level (Parental Control), playback may be inhibited. For BD-VIDEO, stop playback and disable Parental Control for the respective age level. For DVD-VIDEO, enter the 4-digit PIN code number and select a suitable Parental Control level from the menu. Check the region code indicated on the disc package. BD-VIDEO and DVD-VIDEO discs have a Region Code which specifies in which geographical region the disc can be played. In North America, the following discs can be played. BD-VIDEO: Discs with Region Code "B" or no Region Code. DVD-VIDEO: Discs with Region Code "ALL" or "4". PAL or SECAM format BD-VIDEO discs cannot be played in this TV.
<ul style="list-style-type: none"> Playback stops partway when playing DVD discs recorded or edited in another recorder. 	<ul style="list-style-type: none"> With discs edited in another recorder, playlist content exceeding 12 hours cannot be played. Some DVD-R DL (dual-layer) discs cannot be played.
<ul style="list-style-type: none"> Resuming playback from a previous point does not work. 	<ul style="list-style-type: none"> The resume function will no longer work if the disc was removed. Also in some other cases, the resume function may not work, depending on the disc and the playback circumstances.
<ul style="list-style-type: none"> Cannot switch the soundtrack of bilingual program material. 	<ul style="list-style-type: none"> If the TV is connected to audio equipment via a digital link, switch the soundtrack at the amplifier. If the amplifier has no suitable function for this, use an analog connection and switch the soundtrack at this TV.
<ul style="list-style-type: none"> Cannot display the Title List screen. 	<ul style="list-style-type: none"> Take out the disc, and then load the disc again. Turn power off the main power, and then turn power on again.
<ul style="list-style-type: none"> "**" is shown in a title indication on the Title List screen. 	<ul style="list-style-type: none"> Characters in title names of material created on other equipment that cannot be displayed by this TV are shown as asterisks, such as "**** ...".

Troubleshooting-Disc Playback (continued)

Problem	Possible Solution
<ul style="list-style-type: none"> Still image playback or frame advance playback does not work properly. 	<ul style="list-style-type: none"> Frame advance playback on discs other than DVD-RW/R (VR format) may not work properly. Some commercially available BD-VIDEO and DVD-VIDEO discs are not compatible with still image playback or frame advance playback. On BD-VIDEO discs, frame reverse playback does not work.
<ul style="list-style-type: none"> Fast forward/reverse (search) does not work properly. 	<ul style="list-style-type: none"> Depending on the disc and the scene being played, the speed of fast forward may not be as described in this manual. Search across different titles is not possible. Except for audio CDs, the TV will switch to playback mode for BD and DVD discs.
<ul style="list-style-type: none"> Slow playback does not work properly. 	<ul style="list-style-type: none"> At the end of a title, slow playback will be canceled. Slow playback across different titles is not possible. With BD-VIDEO discs, reverse slow playback is not possible.
<ul style="list-style-type: none"> Cannot play DVD discs recorded on other equipment. 	<ul style="list-style-type: none"> Discs that were not finalized on the other equipment may not play in this TV. Finalize the disc in the recorder that was used to create it. Discs in formats not supported by this TV, such as discs recorded with a high-definition digital video camera cannot be played in this TV. Discs created on a computer may not play in this TV.
<ul style="list-style-type: none"> The disc is automatically ejected. 	<ul style="list-style-type: none"> Make sure that region code on the disc matches that of this TV. Make sure that the disc is playable. Make sure that the disc is loaded properly. The disc should be loaded with the playback side facing the back of the TV. Take out the disc and clean it.
<ul style="list-style-type: none"> Disc cannot be ejected. 	<ul style="list-style-type: none"> Turn power off the main power, and then turn power on again. After the power indicator has come on, press ▲ (EJECT) on the TV or EJECT on the remote control unit. If the above steps do not resolve the problem, please contact your dealer or an authorized service center.
<ul style="list-style-type: none"> The TV makes a snapping sound when starting playback or loading a disc. 	<ul style="list-style-type: none"> The TV may sometimes make a snapping sound when starting playback if it has not been operated in a while. These sounds are not malfunctions of the TV but are normal operating conditions.
<ul style="list-style-type: none"> Pressing MENU does not bring up a menu. 	<ul style="list-style-type: none"> If a message appears, follow the instructions in the message.
<ul style="list-style-type: none"> A MiniDisc (MD) recorder is connected to the TV via a digital link. When recording songs from a CD onto MD, the track numbers are incorrect. 	<ul style="list-style-type: none"> If the pauses between tracks on the CD are short, the track numbers on the MD may be different. In cases such as when tracks were specified using an on-screen menu, the track numbers on the MD may be different.

Troubleshooting-Network

Problem	Possible causes and solutions
<ul style="list-style-type: none"> Cannot connect to the Internet. 	<ul style="list-style-type: none"> Is the ETHERNET cable connected properly? Is the wrong cable such as a modular cable used? Connect a ETHERNET cable to the ETHERNET terminal. (Page 16) Is the power for the connected equipment, such as broadband router or modem turned on? Is the broadband router and/or modem properly connected? Is the proper value(s) set in the network setting? Check "Communication Setup". (Pages 66–67)
<ul style="list-style-type: none"> Cannot download BD-LIVE contents. 	<ul style="list-style-type: none"> Is the ETHERNET cable connected properly? Is the USB memory device properly connected? Check that the USB memory device is connected to the BD STORAGE/SERVICE terminal of this TV. Check if the BD disc supports BD-LIVE. Check the setting for "BD Internet Access". (Page 65)

On-screen Error Messages

The following messages appear on the TV screen in case of an error during operation.

Error message	Possible Error	Suggested Solution
<ul style="list-style-type: none"> Cannot play. 	<ul style="list-style-type: none"> The disc cannot be played back with this TV. 	<ul style="list-style-type: none"> Check the disc, and load it correctly.
<ul style="list-style-type: none"> Incompatible disc. 	<ul style="list-style-type: none"> If you load a disc which cannot be played with this TV (i.e. a scratched disc), or if you load a disc upside down, this message will appear, and the disc tray will automatically pop out. 	<ul style="list-style-type: none"> Remove the disc.
	<ul style="list-style-type: none"> Occurs if the loaded disc cannot be played because it is a non-standard disc or scratched, etc. 	
<ul style="list-style-type: none"> Cannot operate. 	<ul style="list-style-type: none"> Occurs if an operation is incorrect. 	—
<ul style="list-style-type: none"> This USB memory is not formatted properly. Please format the memory in USB memory management. 	<ul style="list-style-type: none"> Occurs if there is a formatting error. Occurs if the USB memory is not formatted with FAT 32/16. 	<ul style="list-style-type: none"> Format the USB memory again. Format the USB memory with your PC.
<ul style="list-style-type: none"> The Connected USB Memory cannot be used. It should be compliant with USB 2.0 	<ul style="list-style-type: none"> Occurs if USB memory not compliant with USB 2.0 High Speed (480Mbit/s) is used (i.e. USB 1.0/USB 1.1). 	<ul style="list-style-type: none"> Connect USB 2.0 High Speed (480Mbit/s) compliant USB memory.

Cautions regarding use in high and low temperature environments

- When the unit is used in a low temperature space (e.g. room, office), the picture may leave trails or appear slightly delayed. This is not a malfunction, and the unit will recover when the temperature returns to normal.
 - Do not leave the unit in a hot or cold location. Also, do not leave the unit in a location exposed to direct sunlight or near a heater, as this may cause the cabinet to deform and the LCD panel to malfunction.
- Storage temperature: -20°C to +60°C.

Error messages about recording using AQUOS LINK

The example of an error message displayed on a screen	Error code	Possible Solution
Failed to record Cannot record the broadcast.	S05	Check the content (broadcast or programme) or the recording medium such as HDD or DVD. Either the content or the recording medium may be incompatible.
Failed to record Cannot record the broadcast.	S06	This network cannot be recorded. Use the recording function of your recording device, not the AQUOS LINK function.
Failed to record Cannot record the broadcast.	S07	
Failed to record	S09	Use the recording function of your recording device, not the AQUOS LINK function.
Failed to record	S10	
Failed to record	S11	
Failed to record	S12	
Failed to record Cannot record the programme.	S13	Check the content (broadcast or programme). It may be incompatible.
Failed to record Cannot record the programme.	S14	
Failed to record No record media available.	S16	Check the recording medium.
Failed to record Cannot record while playback.	S17	Stop playback and set up the recording again.
Failed to record Cannot record while recording other programme.	S18	During recording, another recording is not possible.
Failed to record No record media available.	S19	Check the recording medium. Writing to the medium is prohibited.
Failed to record Cannot record while not receiving broadcast.	S20	Please check if the settings are properly set. Broadcasts are not receivable.
Failed to record No record media available.	S21	Recording to the medium is not possible. Check the recording medium.
Failed to record No recordable memory available.	S22	Check the capacity of the recording medium.
Failed to record Age limitation is set.	S23	Deactivate the child lock and set up the recording again.
Failed to record Cannot record with the recorder.	S31	Check your recording device.

Reset

If complex adjustments are made and the settings cannot be restored to normal, you can reset the settings to the factory preset values.

1 Press **MENU** and the MENU screen displays.

2 Press **◀/▶** to select “Setup”.

3 Press **▲/▼** to select “Reset”, and then press **ENTER**.

4 If you have already set the password, enter it here.

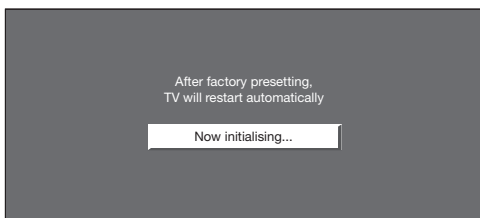
- “Return to factory pre-settings” displays on the screen.

5 Press **◀/▶** to select “Yes”, and then press **ENTER**.

- “Now, TV will restart automatically. OK?” displays on the screen.

6 Press **◀/▶** to select “Yes”, and then press **ENTER**.

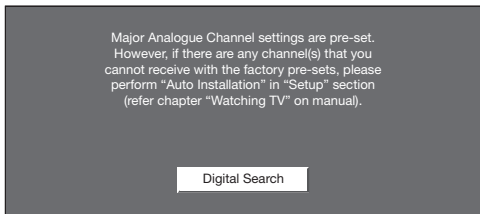
- “Now initialising...” displays on the screen and blinks.
- After the reset has completed, the power shuts off and then comes back on. The screen will have returned to its original settings.



7 Press **▲/▼** to select the desired language listed on the screen, and then press **ENTER**.

Press **◀/▶** to select “HOME” or “STORE”, and then press **ENTER**.

8 Press **ENTER**.



- Major analogue channel settings are pre-set. However if there are any channel(s) that you cannot receive with the factory pre-sets, please perform “Auto installation” in “Setup” section. (See page 22.)

9 The TV searches for, sort and stores all the receivable TV stations according to their settings and the connected antenna.

- To abort the initial auto installation in progress, press **RETURN**.

NOTE

- When the TV is in STORE mode, repeat steps 1 to 7 to change to HOME mode.

Download setup

The TV automatically determines whether a new software version is available when the TV is in standby mode.

Selected item	Description
Yes	Automatically searches for new software updates available when the TV is in standby mode.
No	Does not search for update information.
Now	Checks if there is new software immediately.

Downloading the software

You can select the method of update.

- 1 If the software is updated, the confirmation message “New download information has been detected.” appears
 - If the TV receives the update service while in standby mode, a confirmation message displays after turning on the power.
- 2 Follow the screen prompts.

Selected item	Description
Yes	Starts downloading immediately. It takes approximately one hour to update. You cannot carry out other operations while downloading. <ul style="list-style-type: none"> • Cancels the download by pressing ENTER on the remote control unit when “Discontinue” is displayed on the screen during the update.
No	Starts downloading automatically several minutes after entering standby mode.

NOTE

- The TV must remain in standby mode for download. Do not turn off the power using **POWER** on the TV.
- Updating the software may take some time.

Information

Message list

When a new broadcast station is detected, the message is updated in the “Message list” of the “Information” menu.

Receiver report

Display reports regarding failures and changes for timer settings.

Identification

You can check the current version of the TV software on the screen.
(BD version is Blu-ray disc Setup menu.)

Specifications

Item		Model	LC-46LB700X
LCD panel			46" (1170 mm) Advanced Super View & BLACK TFT LCD
Resolution			2,073,600 pixels (1920 × 1080)
Video Colour System			PAL/SECAM/NTSC 3.58/NTSC 4.43/PAL 60
TV Function	TV-Standard	Analogue	PAL: B/G, D/K, I SECAM: B/G, D/K, K/K ₁
		Digital	DVB-T
	Receiving Channel	VHF/UHF	44.25—863.25 MHz
		CATV	S1—S41ch (including Hyperband)
	TV-Tuning System		Auto Preset 99 ch
STEREO/BILINGUAL			NICAM: B/G, I, D/K A2 stereo: B/G
Backlight life			100,000 hours (at Backlight Standard position)
Viewing angles			H : 176° V : 176°
Audio amplifier			10W × 2
Speakers			10 × 4 cm 2pcs
Terminals	Rear	ANTENNA IN	UHF/VHF 75 Ω DIN type
		INPUT 1	HDMI (HDMI input) (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz, 1080P/24Hz), AUDIO in (ϕ3.5 mm jack)
		INPUT 2	HDMI (HDMI input) (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz, 1080P/24Hz)
		INPUT 3	HDMI (HDMI input) (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz, 1080P/50Hz, 1080P/60Hz, 1080P/24Hz)
		INPUT 4	VIDEO in, AUDIO in, S-VIDEO in, COMPONENT in (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz)
		INPUT 5	VIDEO in, AUDIO in
		INPUT 6	VIDEO in, AUDIO in, COMPONENT in (480I, 576I, 480P, 576P, 720P/50Hz, 720P/60Hz, 1080I/50Hz, 1080I/60Hz)
		INPUT 7 (PC input)	15 pin mini D-sub, AUDIO in (common use with INPUT1) (ϕ3.5 mm jack)
		MONITOR OUT	VIDEO out, AUDIO out
		RS-232C	9 pin D-sub male connector
Disc Drive	ETHERNET		Network connector (See page 9.)
	BD STORAGE/SERVICE		USB 2.0 correspondence (for Local storage/Software Update)
OSD language			English/Simplified Chinese/Arabic
Power Requirement			AC 110—240 V, 50/60 Hz
Power Consumption			166 W (0.5 W Standby)
Weight	without stand		21.0 kg
	with stand		25.0 kg
Operating Temperature			5°C — 35°C

- As a part of policy of continuous improvement, SHARP reserves the right to make design and specification changes for product improvement without prior notice. The performance specification figures indicated are nominal values of production units. There may be some deviations from these values in individual units.

Optional accessory

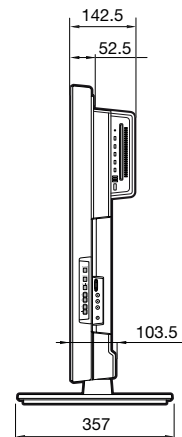
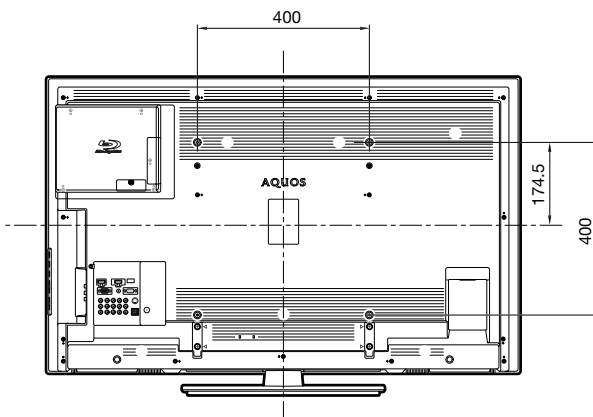
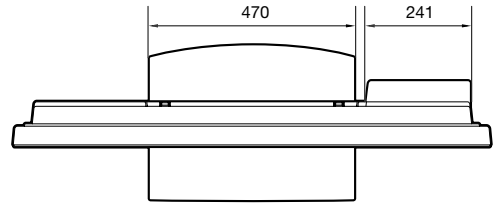
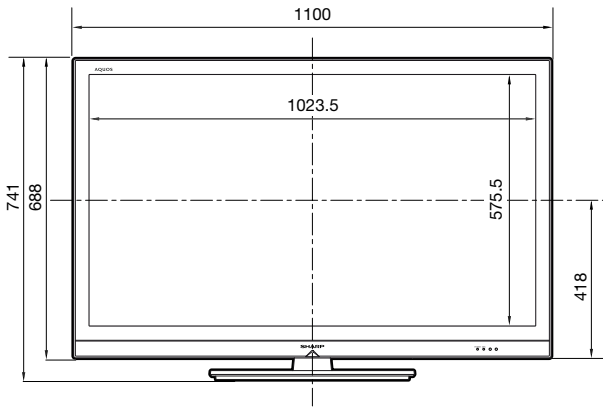
The listed optional accessory is available for the LCD colour TV. Please purchase it at your nearest shop.

- Additional optional accessories may be available in the near future. When purchasing, please read the newest catalogue for compatibility and check the availability.

Part name	Model number
Wall mount bracket	AN-52AG4

Dimensional drawings

Unit: mm



Mounting the TV on the wall

Removing the stand

For wall mounting with the optional bracket (AN-52AG4), remove the stand.

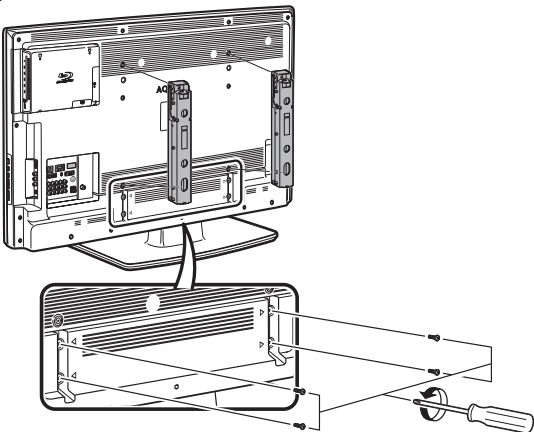
Before detaching/attaching the stand

- Before detaching (or attaching) the stand, unplug the AC cord from the AC outlet.
- Remove all terminal covers and connected cables.
- Lay the TV down on cushioning (such as a blanket) over a table.
- Make sure two or more people perform the operation.

CAUTION

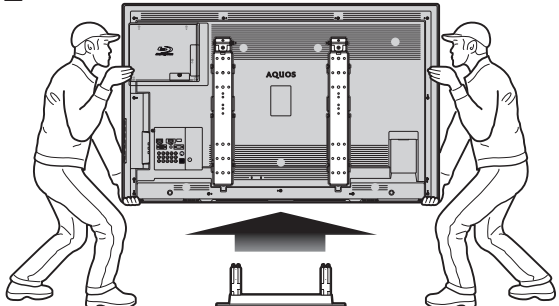
- Do not remove the stand from the TV unless using an optional bracket to mount it.

1



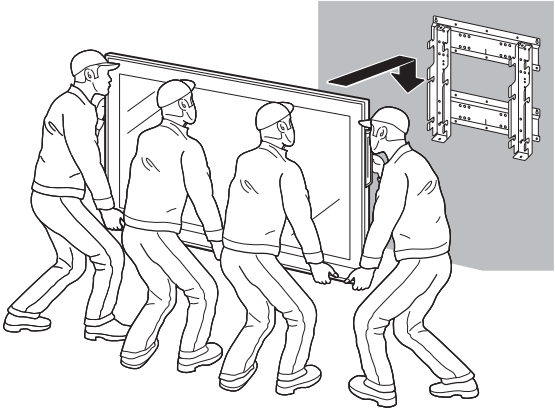
- ① Unfasten the four screws used to secure the stand in place.
- ② Attach the wall mount brackets.

2



- ① Detach the stand from the TV. (Hold the stand so it will not drop from the edge of the base area.)
- ② Make sure do detach the TV with it tilted slightly backwards and supporting the knobs on the rear of the TV while holding the stand.
- ③ Don't push hard on the speaker cover portion of the TV.

3



Set the TV on the wall.
As the TV is very heavy, be careful not to drop it on a hard floor or on your foot.

NOTE

- To attach the stand, perform the above steps in reverse order.

Handling and precautions with the wall-mounted TV

- You can mount the TV on the wall using the optional AN-52AG4 bracket.
- For details, refer to the instructions supplied with the optional bracket.

CAUTION

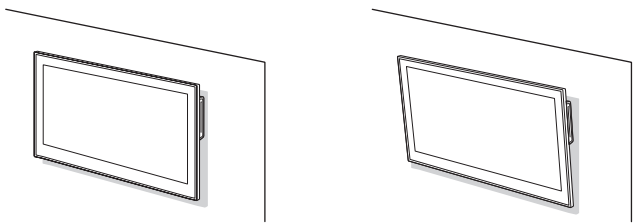
- **This TV should be mounted on the wall only with the AN-52AG4 (SHARP) wall mount bracket. The use of other wall mount brackets may result in an unstable installation and may cause serious injuries.**
- **Installing the Liquid Crystal Television requires special skill that should only be performed by qualified service personnel. Customers should not attempt to do the work themselves. SHARP bears no responsibility for improper mounting or mounting that results in accident or injury.**

Using an optional bracket to mount the TV

- You can ask a qualified service personnel about using an optional AN-52AG4 bracket to mount the TV to the wall.
- Carefully read the instructions that come with the bracket before beginning work.

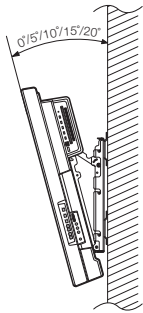
Hanging on the wall

AN-52AG4 wall mount bracket.
(See the bracket instructions for details.)



Vertical mounting Angular mounting

About setting the TV angle



AN-52AG4

NOTE

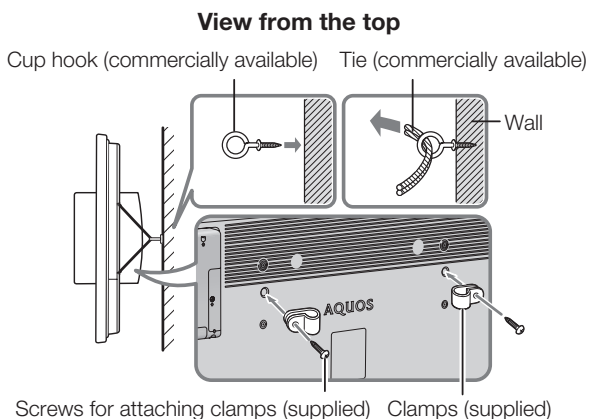
- Detach the cable clamps on the rear of the TV when using the optional mount bracket.

Protection against overturning

There is a danger of the product overturning in the case of a disaster or sudden collision. Carry out the following tip-resistant measurement for your safety.

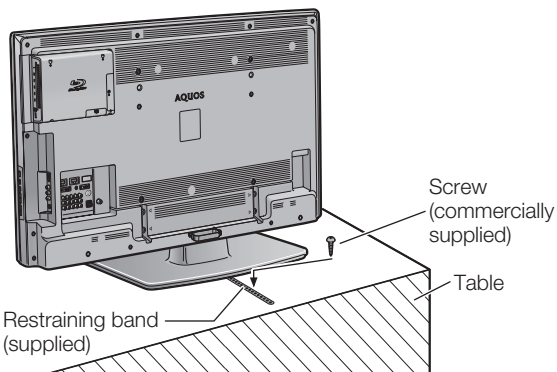
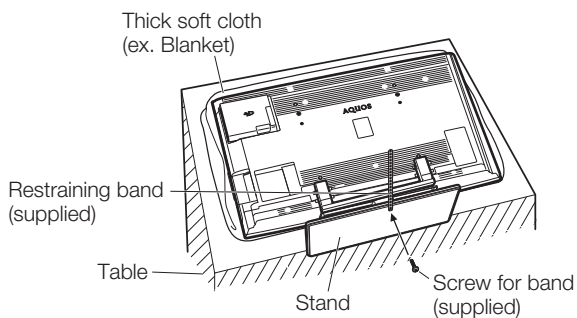
Anchoring the TV to the wall or a pillar

- 1 Fix the product with the 2 clamps (supplied), using the screws (supplied).
- 2 Fix the TV to the wall using extrastrong ties (commercially available).



Fixing the TV to the table

- 1 Lay the TV down on cushioning (such as a blanket) over a table.
- 2 Attach the band (supplied) to the bottom of the stand using the screw (supplied).
- 3 Transfer the product to the table where you intend to fix the TV.
- 4 Fix the TV to the table by the band with a screw (commercially available).
 - Use a screw (commercially available) whose shape is compatible with the band.

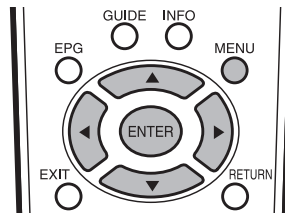


CAUTION

- As this product is heavy, use a table that is wide enough to support the product and capable of withstanding the product's weight. The table should be set where it will not be overturned.

CLEARING THE PASSWORD

If you forget the password, clear the password using the following procedure.

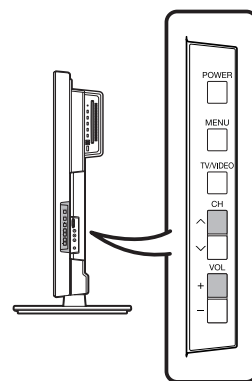


1 Press **MENU** to display the MENU screen, and then press ◀▶ to select "Setup".

2 Press ▲/▼ to select "Auto installation", "Programme setup", "Child lock", "Reset", and the password input screen displays.

— — — —

3 Press and hold both **CH▲** and **VOL+** on the TV simultaneously until the message appears on the screen.



CLEARING THE PIN CODE

If you forget the PIN code, clear the PIN code using reset the settings to the factory preset values. (See page 90.)



The Password is

				.
--	--	--	--	---

The PIN code is

				.
--	--	--	--	---

NOTE

- As a precautionary measure, make a note of your password and PIN code above, remove it from this manual, and keep it in a familiar place.

Information on the software license for this product

Software composition

The software included in this product is comprised of various software components whose individual copyrights are held by SHARP or by third parties.

Software developed by SHARP and open source software

The copyrights for the software components and various relevant documents included with this product that were developed or written by SHARP are owned by SHARP and are protected by the Copyright Act, international treaties, and other relevant laws. This product also makes use of freely distributed software and software components whose copyrights are held by third parties. These include software components covered by a GNU General Public License (hereafter GPL), a GNU Lesser General Public License (hereafter LGPL) or other license agreement.

Obtaining source code

Some of the open source software licensors require the distributor to provide the source code with the executable software components. GPL and LGPL include similar requirements. For information on obtaining the source code for the open source software and for obtaining the GPL, LGPL, and other license agreement information, visit the following website:

<http://www.sharp.net.au/>

We are unable to answer any questions about the source code for the open source software. The source code for the software components whose copyrights are held by SHARP is not distributed.

Acknowledgements

The following open source software components are included in this product:

- linux kernel
- busy box
- uClibc
- zlib
- libpng
- libjpeg
- mtd-utils
- DirectFB
- OpenSSL
- bash
- freetype
- libmpeg2
- libsysfs
- libxml2
- mtd/jffs2
- ncurses

Memo

Memo

Memo

SHARP

FOR LOCATION ENQUIRIES WITHIN

AUSTRALIA

REGARDING YOUR LOCAL

SHARP APPROVED SERVICE CENTRE

VISIT OUR WEBSITE AT

www.sharp.net.au

OR CALL SHARP CUSTOMER CARE

1300 135 022

(LOCAL CALL COST APPLY WITHIN AUSTRALIA)

SHARP CORPORATION OF AUSTRALIA PTY LTD

SHARP

FOR LOCATION ENQUIRIES WITHIN

NEW ZEALAND

REGARDING YOUR LOCAL

SHARP APPROVED SERVICE CENTRE

VISIT OUR WEBSITE AT

www.sharp.net.nz

CONTACT YOUR SELLING DEALER/RETAILER

OR CALL

SHARP CUSTOMER SERVICES

TELEPHONE: 09 573 0111

FACSIMILE: 09 573 0113

SHARP CORPORATION OF NEW ZEALAND LIMITED

SHARP

WARRANTY

Consumer Electronic Products

Congratulations on Your Purchase!

This Sharp product is warranted against faults in materials and manufacture for a period of twelve (12) months from the date of original purchase.

If service is required during the warranty period, please contact your nearest Sharp Approved Service Centre. These repairs would be carried out at no charge to the owner, subject to the conditions specified herein.

The owner is responsible for any transportation and insurance costs if the product has to be returned for repair.

This warranty does not extend to accessories or defects or injuries caused by or resulting from causes not attributable to faulty parts or the manufacture of the product, including but not limited to, defect or injury caused by or resulting from misuse, abuse, neglect, accidental damage, improper voltage, liquid spillage, vermin infestation, software, or any alterations made to the product which are not authorised by Sharp.

Please retain your sales documentation, as this should be produced to validate a warranty claim.

This warranty is in addition to and in no way limits, varies or excludes any express and implied rights and remedies under any relevant legislation in the country of sale.

IMPORTANT

DO NOT RETURN THIS DOCUMENT TO SHARP

For your reference, please enter the particulars of your purchase below and retain, with your purchase documentation.

Model No. _____

Serial No. _____

Date of Purchase _____

Retailer _____

SHARP

SHARP CORPORATION OF
AUSTRALIA PTY LIMITED
ABN 40 003 039 405
1 Huntingwood Drive
Huntingwood NSW2148

SHARP CORPORATION OF
NEW ZEALAND LIMITED
59 Hugo Johnston Drive
Penrose, Auckland

SPForm030 (JUNE 2004)

IMPORTANT NOTICE: This warranty applies only to products sold in Australia & New Zealand

SHARP®

SHARP CORPORATION

Printed in Malaysia
TINS-E519WJZZ
10P01-MA-NP